

	1	2	3	4	5	6	7	8	9	10																																																															
A	<div><div>ABB</div><div>POWER SYSTEMS NETWORK MANAGEMENT PROTECTION AND SUBSTATION AUTOMATION SYSTEMS WBS NO: S-13656</div><div>ABB AUTOMATION COMPANY LTD., 414, AL-KHARJ ROAD SECOND INDUSTRIAL CITY RIYADH-11383 K.S.A</div></div>																																																																								
B																																																																									
C	<div>CONTRACTOR : ABB Contracting Company</div> <div>CLIENT : National Grid sa</div>																																																																								
D	<div>PROJECT : CONSTRUCTION OF NEW 132/13.8kV SS 8709 IN AL-KHARJ CITY</div> <div>SUBSTATION : S/S 8709</div>																																																																								
E	<div>CONTRACT NO. : 11131113/00</div> <div>TITLE : Assembly Drawing - +SAS I/F-2</div>																																																																								
F																																																																									
G	<table><tr><td colspan="3">AS-BUILT BY _____ DATE _____</td><td colspan="2">CONTRACT NO. 11131113/00</td><td colspan="2">JOB ORDER NO. S-13656</td><td colspan="3">COVER SHEET</td><td colspan="2"><div>الشركة الوطنية لنقل الكهرباء</div><div>نقل الكهرباء</div><div>National Grid sa</div></td></tr><tr><td></td><td></td><td></td><td colspan="2">DRAWN BY RIZ</td><td colspan="2">CHECKED BY JKR</td><td colspan="3">SAS INTERFACE PANEL +SAS I/F-2</td><td colspan="2"></td></tr><tr><td>01</td><td>13 48</td><td colspan="2">AS MANUFACTURED</td><td colspan="2">DATE STARTED 15.3.2013</td><td colspan="2">DATE COMPLETED</td><td colspan="3">S/S 8709 S-13656</td><td colspan="2"></td></tr><tr><td>00</td><td>13 20</td><td colspan="2">FOR APPROVAL</td><td colspan="2">OPRG. DEPT. CTPD</td><td colspan="2">ENG. DEPT. AUT-PSAC</td><td colspan="3">RIYADH SAUDI ARABIA</td><td colspan="2"></td></tr><tr><td>REV. NO.</td><td>DATE</td><td colspan="2">DESCRIPTION</td><td colspan="2"></td><td colspan="2"></td><td colspan="3"></td><td colspan="2"></td></tr></table>										AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		COVER SHEET			<div>الشركة الوطنية لنقل الكهرباء</div> <div>نقل الكهرباء</div> <div>National Grid sa</div>					DRAWN BY RIZ		CHECKED BY JKR		SAS INTERFACE PANEL +SAS I/F-2					01	13 48	AS MANUFACTURED		DATE STARTED 15.3.2013		DATE COMPLETED		S/S 8709 S-13656					00	13 20	FOR APPROVAL		OPRG. DEPT. CTPD		ENG. DEPT. AUT-PSAC		RIYADH SAUDI ARABIA					REV. NO.	DATE	DESCRIPTION										
AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		COVER SHEET			<div>الشركة الوطنية لنقل الكهرباء</div> <div>نقل الكهرباء</div> <div>National Grid sa</div>																																																															
			DRAWN BY RIZ		CHECKED BY JKR		SAS INTERFACE PANEL +SAS I/F-2																																																																		
01	13 48	AS MANUFACTURED		DATE STARTED 15.3.2013		DATE COMPLETED		S/S 8709 S-13656																																																																	
00	13 20	FOR APPROVAL		OPRG. DEPT. CTPD		ENG. DEPT. AUT-PSAC		RIYADH SAUDI ARABIA																																																																	
REV. NO.	DATE	DESCRIPTION																																																																							

THIS DRAWING AND THE INFORMATION CONTAINED HEREIN ARE THE SOLE PROPERTY OF National Grid SA NO REPRODUCTION IN FULL OR IN PART SHALL BE OBTAINED FROM THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF ITS OWNER.

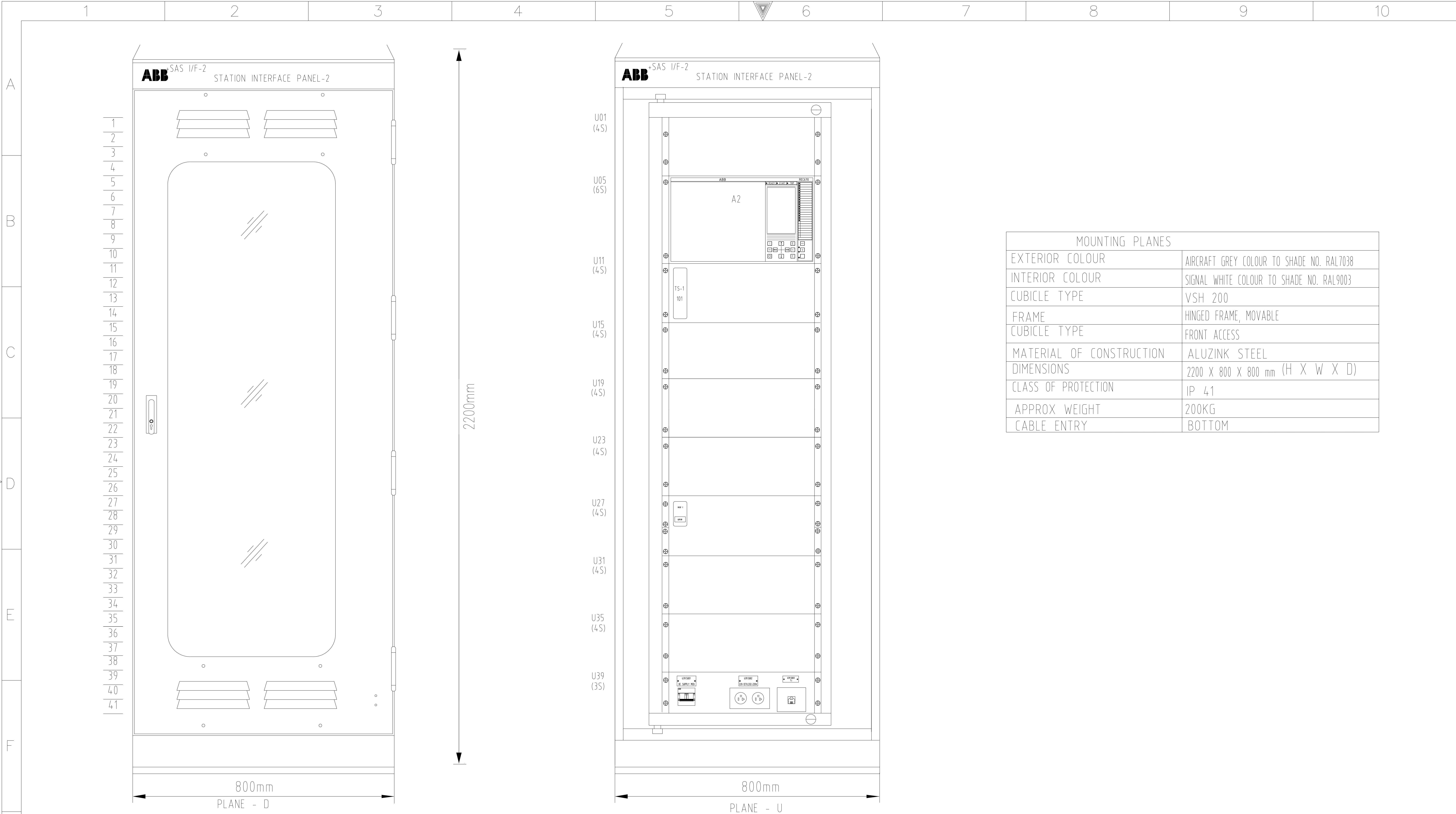


DMS

VECTOR

NGD200

NG/D2-D (2012/01)



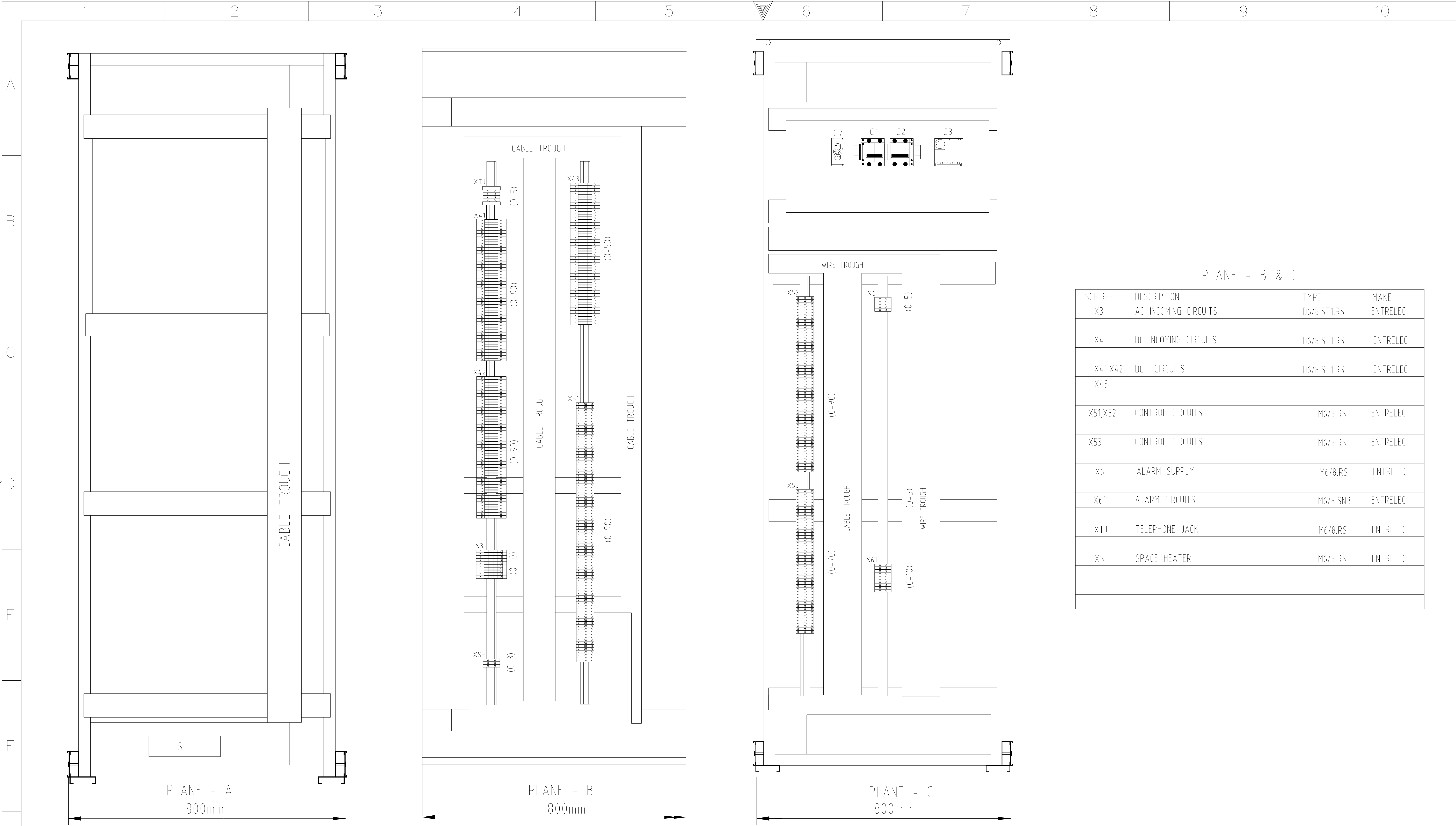
AS-BUILT BY _____ DATE _____ CONTRACT NO. 11131113/00 JOB ORDER NO. S-13656

Ø1	13 48	AS MANUFACTURED
Ø0	13 20	FOR APPROVAL
REV. NO.	DATE	DESCRIPTION

DRAWN BY RIZ CHECKED BY JKR
DATE STARTED 15.3.2013 DATE COMPLETED _____
OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC

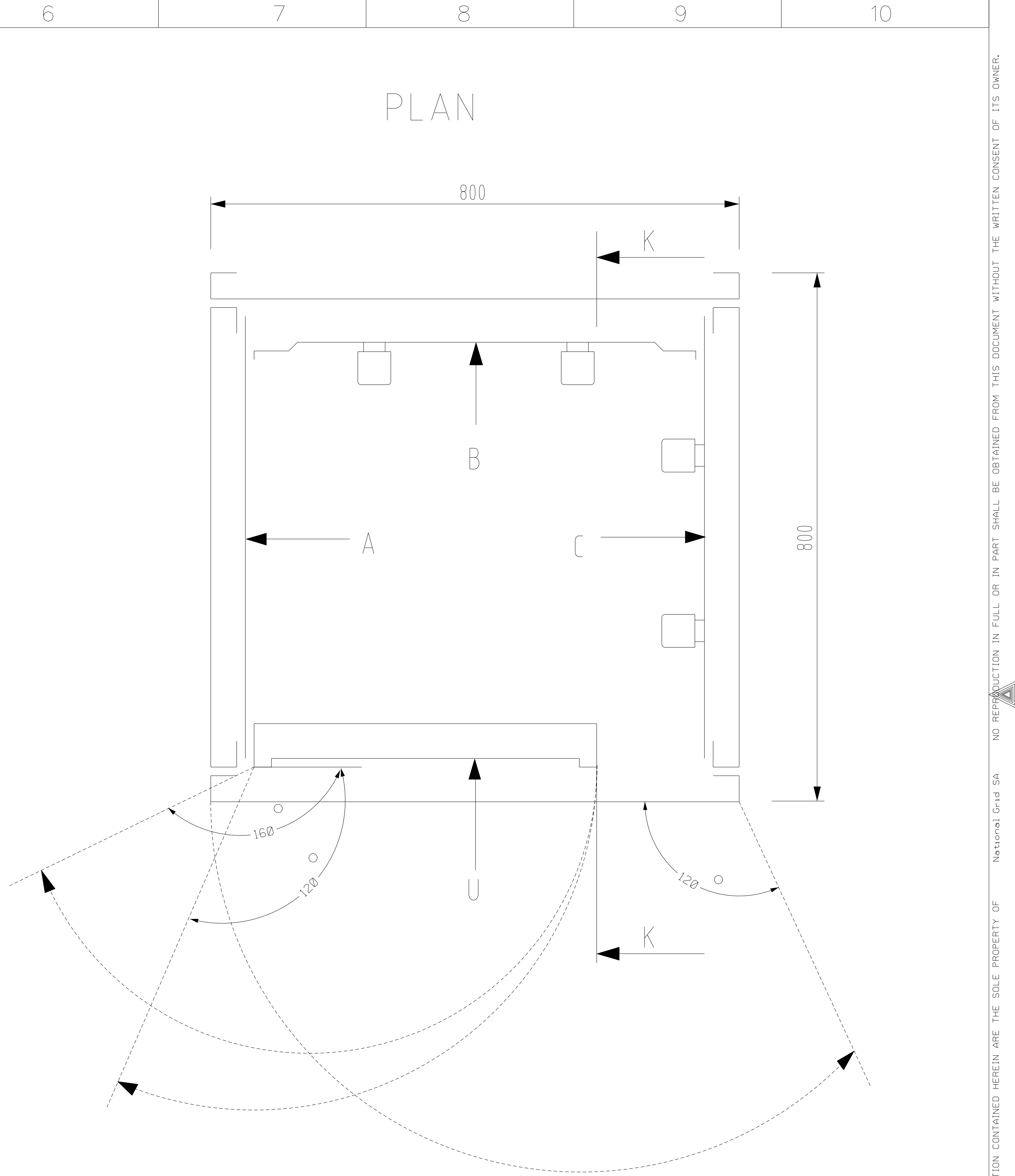
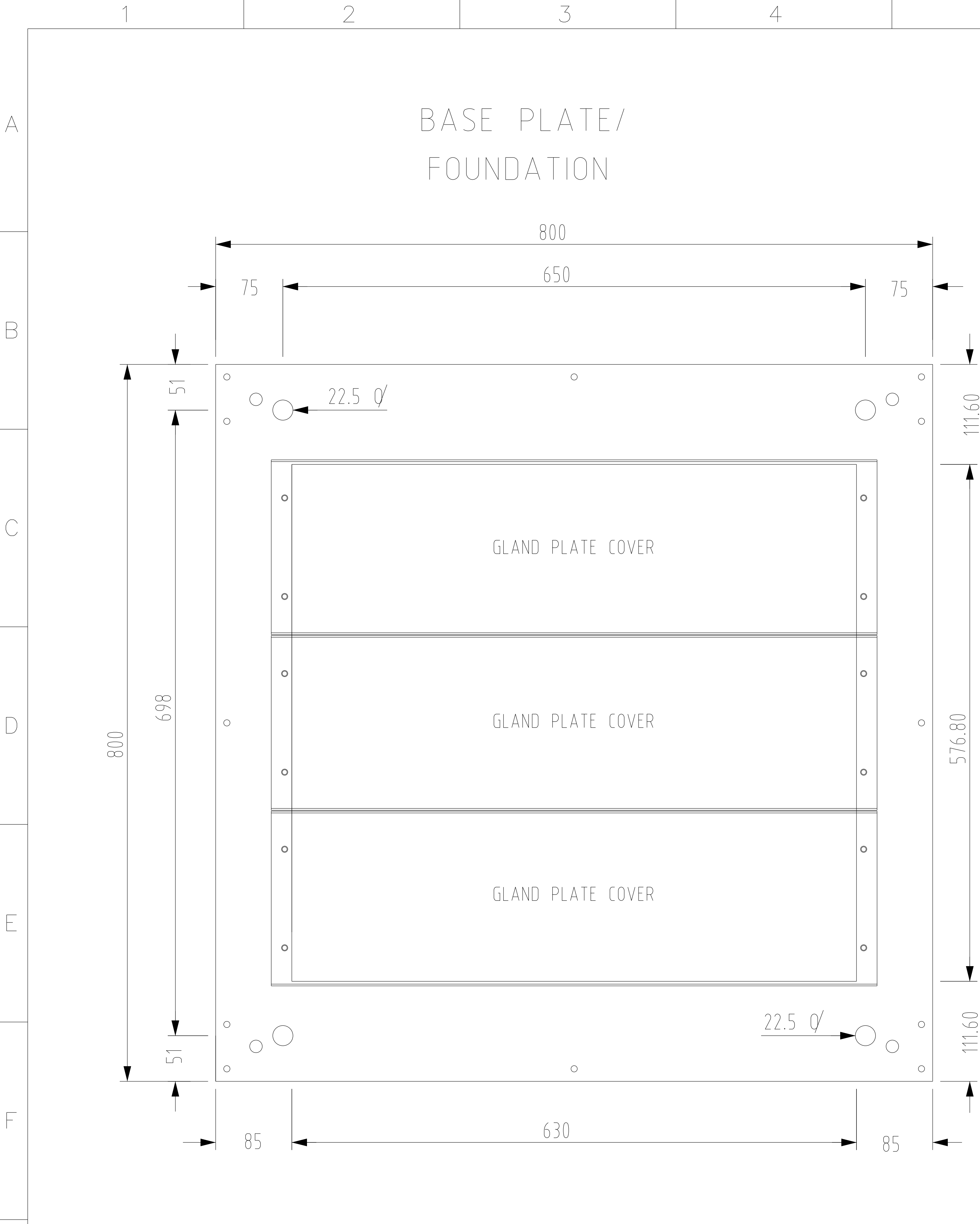
ASSEMBLY DRAWING	
SAS INTERFACE PANEL +SAS I/F-2	
S/S 8709	S-13656
RIYADH	SAUDI ARABIA

الشركة الوطنية لنقل الكهرباء National Grid sa				
INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	
P	C421	CD-322987	SHT	CONT.
			G01	G02
				Ø1



PLANE - B & C

SCH.REF	DESCRIPTION	TYPE	MAKE
X3	AC INCOMING CIRCUITS	D6/8.ST1.RS	ENTRELEC
X4	DC INCOMING CIRCUITS	D6/8.ST1.RS	ENTRELEC
X41,X42 X43	DC CIRCUITS	D6/8.ST1.RS	ENTRELEC
X51,X52	CONTROL CIRCUITS	M6/8.RS	ENTRELEC
X53	CONTROL CIRCUITS	M6/8.RS	ENTRELEC
X6	ALARM SUPPLY	M6/8.RS	ENTRELEC
X61	ALARM CIRCUITS	M6/8.SNB	ENTRELEC
XTJ	TELEPHONE JACK	M6/8.RS	ENTRELEC
XSH	SPACE HEATER	M6/8.RS	ENTRELEC



G

AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656	
01	13 48	AS MANUFACTURED	DRAWN BY RIZ CHECKED BY JKR			
00	13 20	FOR APPROVAL	DATE STARTED 15.3.2013 DATE COMPLETED _____			
REV. NO.	DATE	DESCRIPTION	OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC			

ASSEMBLY DRAWING					
SAS INTERFACE PANEL +SAS I/F-2					
S/S 8709			S-13656		
RIYADH			SAUDI ARABIA		

الشركة الوطنية لنقل الكهرباء



National Grid sa

INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.		REV. NO.
P	C421	CD-322987	SHT G03	CONT. G04	01

THIS DRAWING AND THE INFORMATION CONTAINED HEREIN ARE THE SOLE PROPERTY OF National Grid SA NO REPRODUCTION IN FULL OR IN PART SHALL BE OBTAINED FROM THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF ITS OWNER.

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

A

B

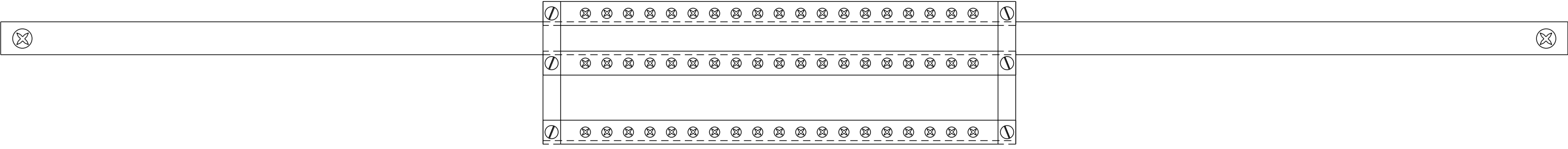
C

D

E

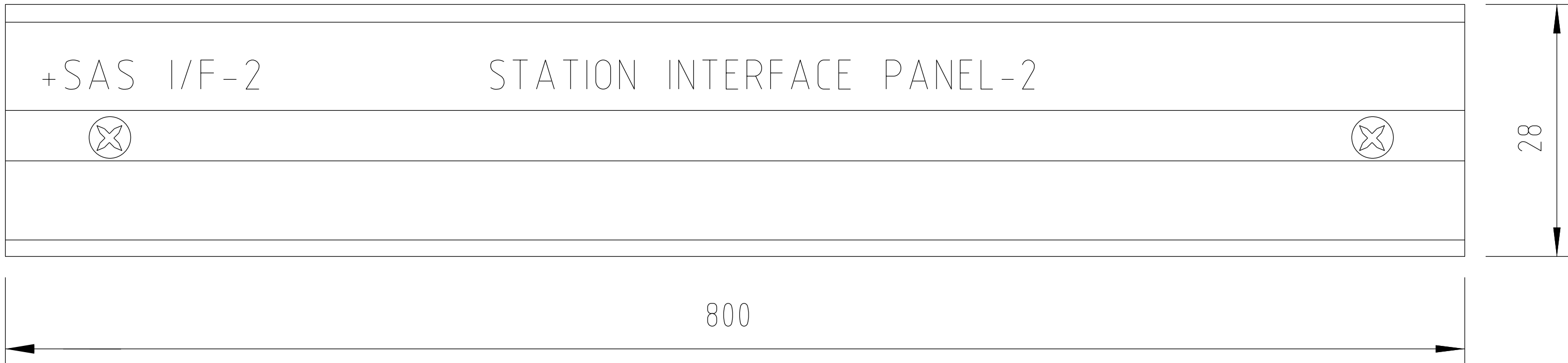
F

G

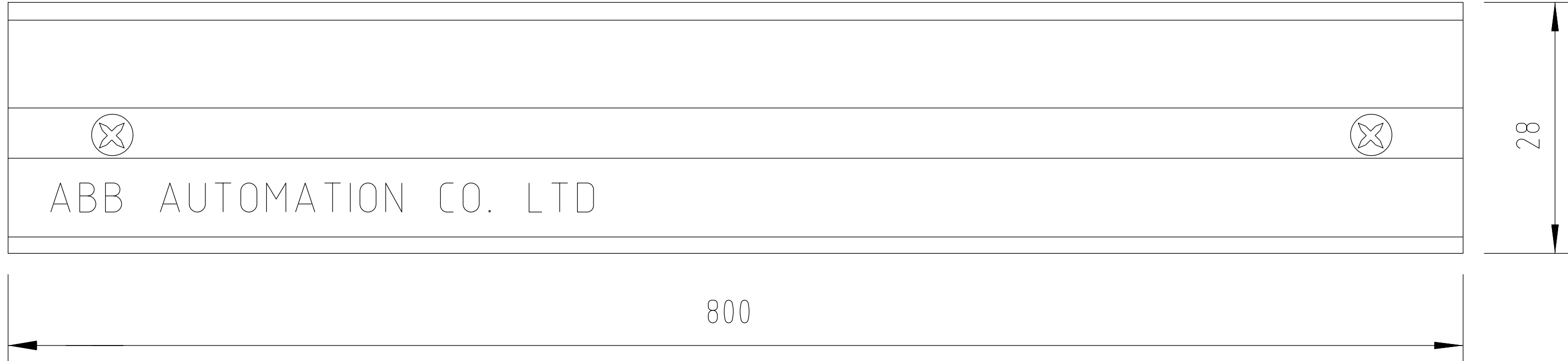


TOP VIEW FOR EARTHING BAR

U PLANE TOP LABEL



U PLANE BOTTOM LABEL



MANUFACTURING LABEL

ABB

ABB Automation Co.Ltd.

PROJECT : National Grid SA - S/S 8709

ORDER REFERENCE : 2875 RF S13656

YEAR OF MANUFACTURE : 2013

PANEL NO. : +SAS I/F-2

DRAWING NO. : S13656-CD-322988

MADE IN THE KINGDOM OF SAUDI ARABIA

AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656	
			DRAWN BY <u> RIZ </u> CHECKED BY <u> JKR </u>			
01	13 48	AS MANUFACTURED	DATE STARTED <u>15.3.2013</u> DATE COMPLETED _____			
00	13 20	FOR APPROVAL	OPRG. DEPT. <u> CTPD </u> ENG. DEPT. <u> AUT-PSAC </u>			
REV. NO.	DATE	DESCRIPTION				

ASSEMBLY DRAWING	
SAS INTERFACE PANEL +SAS I/F-2	
S/S 8709	S-13656
RIYADH	SAUDI ARABIA

<div><div>الشركة الوطنية لنقل الكهرباء</div><div> نقل الكهرباء National Grid SA</div></div>					
INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.		REV. NO.
P	C421	CD-322987	SHT	CONT.	01
			G04	L00	


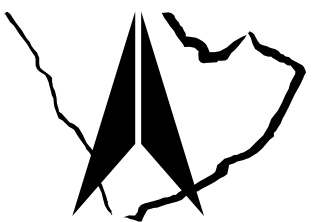
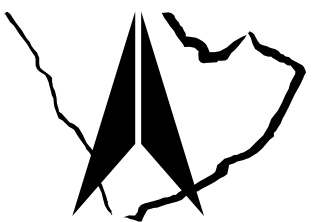
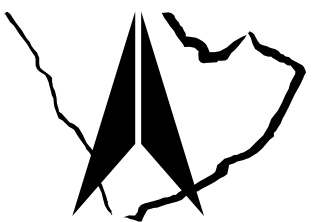
NG/D2-D (2012/01)

DMS

VECTOR

NGD200

THIS DRAWING AND THE INFORMATION CONTAINED HEREIN ARE THE SOLE PROPERTY OF National Grid SA NO REPRODUCTION IN FULL OR IN PART SHALL BE OBTAINED FROM THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF ITS OWNER.

	1	2	3	4	5	6	7	8	9	10																																																																			
A			POWER SYSTEMS NETWORK MANAGEMENT PROTECTION AND SUBSTATION AUTOMATION SYSTEMS WBS NO: S-13656					ABB AUTOMATION COMPANY LTD., 414, AL-KHARJ ROAD SECOND INDUSTRIAL CITY RIYADH-11383 K.S.A																																																																					
B																																																																													
C	CONTRACTOR : ABB Contracting Company																																																																												
	CLIENT : National Grid sa																																																																												
D	PROJECT : CONSTRUCTION OF NEW 132/13.8kV SS 8709 IN AL-KHARJ CITY																																																																												
	SUBSTATION : S/S 8709																																																																												
E	CONTRACT NO. : 11131113/00																																																																												
F	TITLE : LIST OF APPARATUS +SAS I/F-2																																																																												
G	<table><tr><td colspan="3">AS-BUILT BY _____ DATE _____</td><td colspan="2">CONTRACT NO. 11131113/00</td><td colspan="2">JOB ORDER NO. S-13656</td><td colspan="3">COVER SHEET</td><td colspan="2"> نقل الكهرباء الشركة الوطنية لنقل الكهرباء National Grid sa</td></tr><tr><td></td><td></td><td></td><td colspan="3">DRAWN BY <u>RIZ</u> CHECKED BY <u>JKR</u></td><td colspan="3">SAS INTERFACE PANEL +SAS I/F-2</td><td colspan="2"></td></tr><tr><td>01</td><td>13 48</td><td>AS MANUFACTURED</td><td colspan="3">DATE STARTED <u>15.3.2013</u> DATE COMPLETED _____</td><td colspan="3">S/S 8709 S-13656</td><td>INDEX</td><td>PLANT NO.</td></tr><tr><td>00</td><td>13 20</td><td>FOR APPROVAL</td><td colspan="3">OPRG. DEPT. <u>CTPD</u> ENG. DEPT. <u>AUT-PSAC</u></td><td colspan="3">RIYADH SAUDI ARABIA</td><td>DRAWING NUMBER</td><td>SHEET NO.</td></tr><tr><td>REV. NO.</td><td>DATE</td><td>DESCRIPTION</td><td colspan="3"></td><td colspan="3"></td><td>SHT</td><td>CONT.</td></tr><tr><td></td><td></td><td></td><td colspan="3"></td><td colspan="3"></td><td>L00</td><td>L01</td></tr></table>										AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		COVER SHEET			 نقل الكهرباء الشركة الوطنية لنقل الكهرباء National Grid sa					DRAWN BY <u>RIZ</u> CHECKED BY <u>JKR</u>			SAS INTERFACE PANEL +SAS I/F-2					01	13 48	AS MANUFACTURED	DATE STARTED <u>15.3.2013</u> DATE COMPLETED _____			S/S 8709 S-13656			INDEX	PLANT NO.	00	13 20	FOR APPROVAL	OPRG. DEPT. <u>CTPD</u> ENG. DEPT. <u>AUT-PSAC</u>			RIYADH SAUDI ARABIA			DRAWING NUMBER	SHEET NO.	REV. NO.	DATE	DESCRIPTION							SHT	CONT.										L00	L01
AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		COVER SHEET			 نقل الكهرباء الشركة الوطنية لنقل الكهرباء National Grid sa																																																																			
			DRAWN BY <u>RIZ</u> CHECKED BY <u>JKR</u>			SAS INTERFACE PANEL +SAS I/F-2																																																																							
01	13 48	AS MANUFACTURED	DATE STARTED <u>15.3.2013</u> DATE COMPLETED _____			S/S 8709 S-13656			INDEX	PLANT NO.																																																																			
00	13 20	FOR APPROVAL	OPRG. DEPT. <u>CTPD</u> ENG. DEPT. <u>AUT-PSAC</u>			RIYADH SAUDI ARABIA			DRAWING NUMBER	SHEET NO.																																																																			
REV. NO.	DATE	DESCRIPTION							SHT	CONT.																																																																			
									L00	L01																																																																			

THIS DRAWING AND THE INFORMATION CONTAINED HEREIN ARE THE SOLE PROPERTY OF National Grid SA NO REPRODUCTION IN FULL OR IN PART SHALL BE OBTAINED FROM THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF ITS OWNER.

	1	2	3	4	5	6	7	8	9	10
A										
B										
C										
D										
E										
F										
G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		LIST OF APPARATUS			
			DRAWN BY _____ RIZ _____ CHECKED BY _____ JKR		SAS INTERFACE PANEL +SAS I/F-2				<div>الشركة الوطنية لنقل الكهرباء</div> <div>نقل الكهرباء</div> <div>National Grid sa</div>	
			DATE STARTED 15.3.2013 DATE COMPLETED _____		S/S 8709 S-13656					
	REV. NO.		DATE		DESCRIPTION		OPRG. DEPT. _____ CTPD _____ ENG. DEPT. _____ AUT-PSAC		RIYADH SAUDI ARABIA	

THIS DRAWING AND THE INFORMATION CONTAINED HEREIN ARE THE SOLE PROPERTY OF National Grid SA NO REPRODUCTION IN FULL OR IN PART SHALL BE OBTAINED FROM THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF ITS OWNER.

	1	2	3	4	5	6	7	8	9	10																																																
A																																																										
B	<table><thead><tr><th>LABEL REF.</th><th>LABEL ENGRAVING</th><th>MATERIALS</th><th>ENGRAVING</th><th>LABEL SIZE</th><th>LETTER SIZE</th></tr></thead><tbody><tr><td>U05.5001</td><td>U05.5001 A2</td><td>ALUMINUM PAPER FOIL</td><td>BLACK LETTERS</td><td>50X10mm</td><td>3mm</td></tr><tr><td>U11.101</td><td>U11.101 TS-1</td><td>ALUMINUM PAPER FOIL</td><td>BLACK LETTERS</td><td>50X10mm</td><td>3mm</td></tr><tr><td>U27.101</td><td>U27.101 74IF/SPARE</td><td>ALUMINUM PAPER FOIL</td><td>BLACK LETTERS</td><td>50X10mm</td><td>3mm</td></tr></tbody></table>										LABEL REF.	LABEL ENGRAVING	MATERIALS	ENGRAVING	LABEL SIZE	LETTER SIZE	U05.5001	U05.5001 A2	ALUMINUM PAPER FOIL	BLACK LETTERS	50X10mm	3mm	U11.101	U11.101 TS-1	ALUMINUM PAPER FOIL	BLACK LETTERS	50X10mm	3mm	U27.101	U27.101 74IF/SPARE	ALUMINUM PAPER FOIL	BLACK LETTERS	50X10mm	3mm																								
LABEL REF.	LABEL ENGRAVING	MATERIALS	ENGRAVING	LABEL SIZE	LETTER SIZE																																																					
U05.5001	U05.5001 A2	ALUMINUM PAPER FOIL	BLACK LETTERS	50X10mm	3mm																																																					
U11.101	U11.101 TS-1	ALUMINUM PAPER FOIL	BLACK LETTERS	50X10mm	3mm																																																					
U27.101	U27.101 74IF/SPARE	ALUMINUM PAPER FOIL	BLACK LETTERS	50X10mm	3mm																																																					
C																																																										
D	<table><thead><tr><th>LABEL REF.</th><th>LABEL ENGRAVING</th><th>MATERIALS</th><th>ENGRAVING</th><th>LABEL SIZE</th><th>LETTER SIZE</th></tr></thead><tbody><tr><td>C1</td><td>C1 127V AC SUPPLY MCB</td><td>TRAFOLITE</td><td>BLACK LETTERS ON WHITE BACKGROUND</td><td>50X15mm</td><td>4 mm</td></tr><tr><td>C2</td><td>C2 220V AC SUPPLY MCB</td><td>TRAFOLITE</td><td>BLACK LETTERS ON WHITE BACKGROUND</td><td>50X15mm</td><td>4 mm</td></tr><tr><td>C3</td><td>C3 THERMOSTAT</td><td>TRAFOLITE</td><td>BLACK LETTERS ON WHITE BACKGROUND</td><td>50X15mm</td><td>4 mm</td></tr><tr><td>C7</td><td>C7 ON/OFF SWITCH</td><td>TRAFOLITE</td><td>BLACK LETTERS ON WHITE BACKGROUND</td><td>50X15mm</td><td>4 mm</td></tr><tr><td>DS</td><td>DS DOOR SWITCH</td><td>TRAFOLITE</td><td>BLACK LETTERS ON WHITE BACKGROUND</td><td>50X15mm</td><td>4 mm</td></tr><tr><td>IL</td><td>IL ILLUMINATION LAMP</td><td>TRAFOLITE</td><td>BLACK LETTERS ON WHITE BACKGROUND</td><td>50X15mm</td><td>4 mm</td></tr><tr><td>SH</td><td>SH SPACE HEATER</td><td>TRAFOLITE</td><td>BLACK LETTERS ON WHITE BACKGROUND</td><td>50X15mm</td><td>4 mm</td></tr></tbody></table>										LABEL REF.	LABEL ENGRAVING	MATERIALS	ENGRAVING	LABEL SIZE	LETTER SIZE	C1	C1 127V AC SUPPLY MCB	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4 mm	C2	C2 220V AC SUPPLY MCB	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4 mm	C3	C3 THERMOSTAT	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4 mm	C7	C7 ON/OFF SWITCH	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4 mm	DS	DS DOOR SWITCH	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4 mm	IL	IL ILLUMINATION LAMP	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4 mm	SH	SH SPACE HEATER	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4 mm
LABEL REF.	LABEL ENGRAVING	MATERIALS	ENGRAVING	LABEL SIZE	LETTER SIZE																																																					
C1	C1 127V AC SUPPLY MCB	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4 mm																																																					
C2	C2 220V AC SUPPLY MCB	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4 mm																																																					
C3	C3 THERMOSTAT	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4 mm																																																					
C7	C7 ON/OFF SWITCH	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4 mm																																																					
DS	DS DOOR SWITCH	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4 mm																																																					
IL	IL ILLUMINATION LAMP	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4 mm																																																					
SH	SH SPACE HEATER	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4 mm																																																					
E																																																										
F																																																										
G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		LIST OF APPARATUS		<div>الشركة الوطنية لنقل الكهرباء</div> <div>نقل الكهرباء</div> <div>National Grid sa</div>																																																	
			DRAWN BY RIZ CHECKED BY JKR		SAS INTERFACE PANEL +SAS I/F-2																																																					
	01	13 48	AS MANUFACTURED		S/S 8709		S-13656																																																			
	00	13 20	FOR APPROVAL		RIYADH		SAUDI ARABIA																																																			
	REV. NO.	DATE	DESCRIPTION		OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC																																																					




DMS

VECTOR

NGD200

NG/D2-D (2012/01)

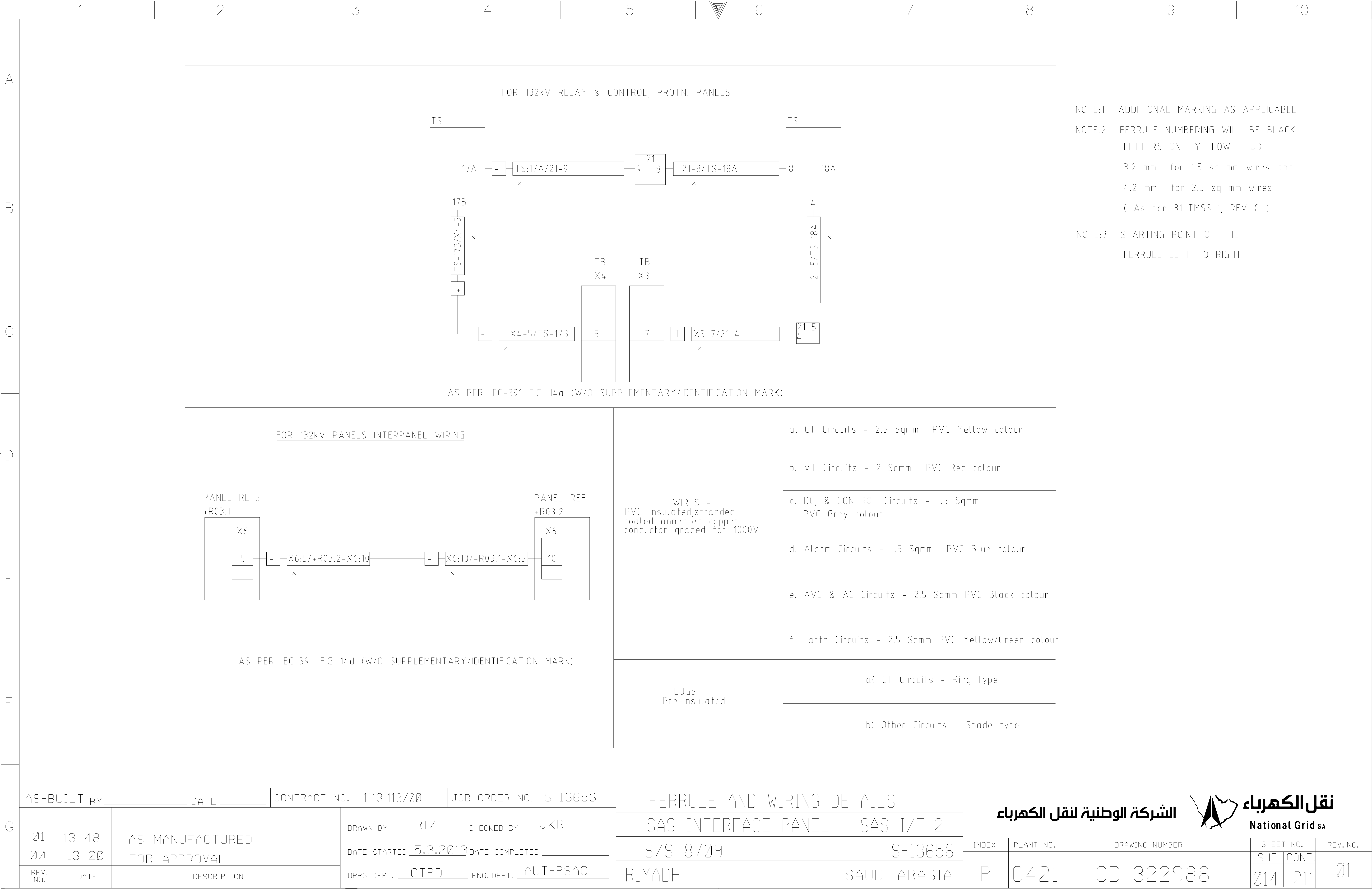
	1	2	3	4	5	6	7	8	9	10												
A			POWER SYSTEMS NETWORK MANAGEMENT PROTECTION AND SUBSTATION AUTOMATION SYSTEMS WBS NO: S-13656					ABB AUTOMATION COMPANY LTD., 414, AL-KHARJ ROAD SECOND INDUSTRIAL CITY RIYADH-11383 K.S.A														
B																						
C	CONTRACTOR : ABB Contracting Company																					
D	CLIENT : National Grid SA																					
E	PROJECT : CONSTRUCTION OF NEW 132/13.8kV SS 8709 IN AL-KHARJ CITY																					
F	SUBSTATION : S/S 8709																					
	CONTRACT NO. : 11131113/00																					
	TITLE : Schematic Drawing +SAS I/F-2																					
G	AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		COVER SHEET														
				DRAWN BY RIZ CHECKED BY JKR		SAS INTERFACE PANEL +SAS I/F-2		<div>الشركة الوطنية لنقل الكهرباء National Grid SA</div> <table><tr><td>INDEX</td><td>PLANT NO.</td><td>DRAWING NUMBER</td><td colspan="2">SHEET NO.</td><td>REV. NO.</td></tr><tr><td>P</td><td>C421</td><td>CD-322988</td><td>SHT</td><td>CONT.</td><td>01</td></tr></table>			INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.		REV. NO.	P	C421	CD-322988	SHT	CONT.	01
INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.		REV. NO.																	
P	C421	CD-322988	SHT	CONT.	01																	
	01	13 48	AS MANUFACTURED		DATE STARTED 15.3.2013 DATE COMPLETED		S/S 8709 S-13656															
	00	13 20	FOR APPROVAL		OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC		RIYADH SAUDI ARABIA															
	REV. NO.	DATE	DESCRIPTION																			

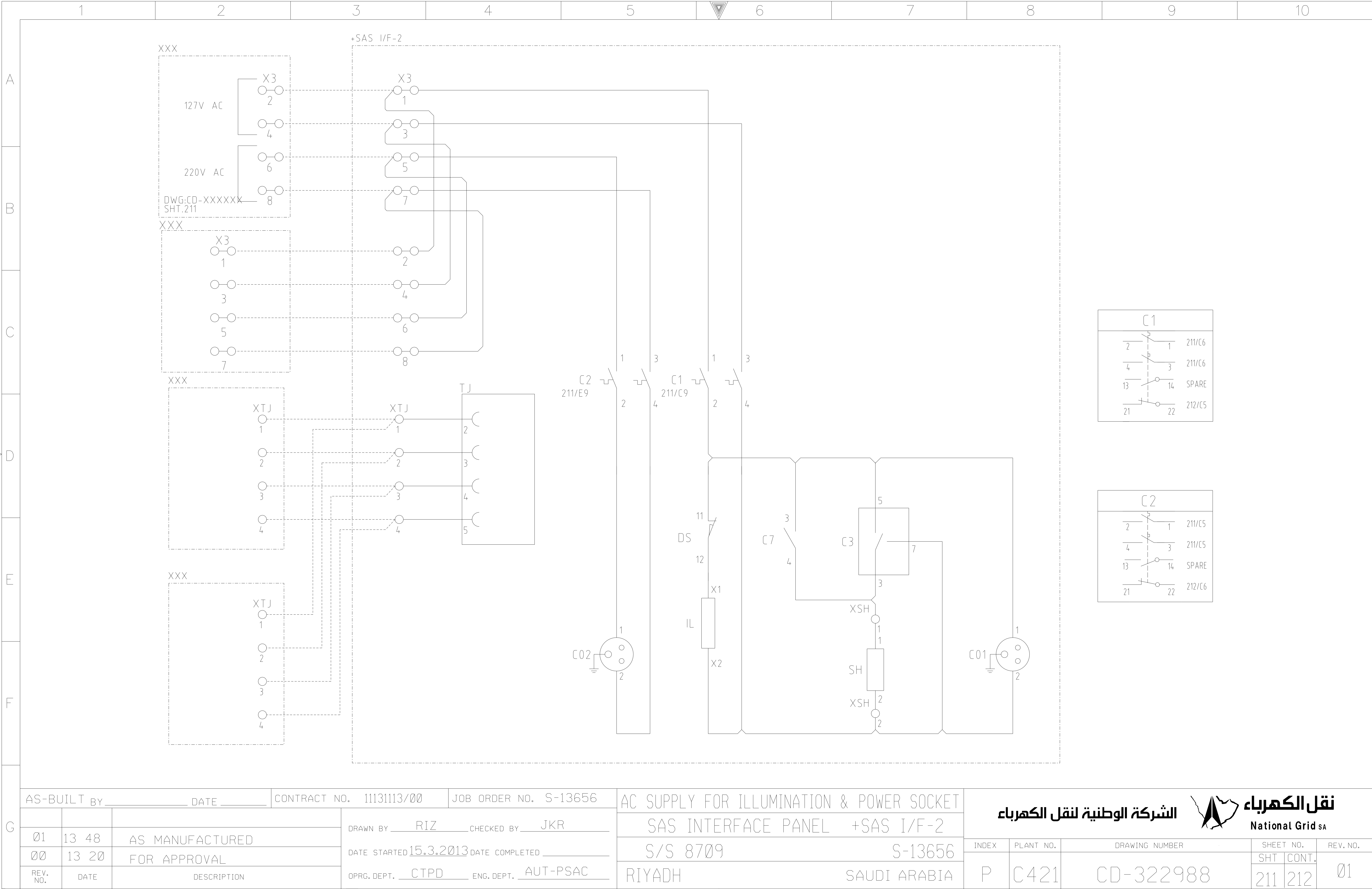
1		2		3		4		5		6		7		8		9		10						
A																								
B																								
C																								
D																								
E																								
F																								
G	AS-BUILT BY _____ DATE _____				CONTRACT NO. 11131113/00				JOB ORDER NO. S-13656				GRAPHICAL SYMBOLS FOR DIAGRAMS				<div>الشركة الوطنية لنقل الكهرباء</div> <div>نقل الكهرباء</div> <div>National Grid sa</div>							
					DRAWN BY <u> RIZ </u> CHECKED BY <u> JKR </u>				SAS INTERFACE PANEL +SAS I/F-2															
	01		13 48		AS MANUFACTURED				DATE STARTED <u>15.3.2013</u> DATE COMPLETED _____				S/S 8709				S-13656							
	00		13 20		FOR APPROVAL				OPRG. DEPT. <u> CTPD </u> ENG. DEPT. <u> AUT-PSAC </u>				RIYADH				SAUDI ARABIA							
	REV. NO.		DATE		DESCRIPTION																			

THIS DRAWING AND THE INFORMATION CONTAINED HEREIN ARE THE SOLE PROPERTY OF National Grid SA NO REPRODUCTION IN FULL OR IN PART SHALL BE OBTAINED FROM THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF ITS OWNER.

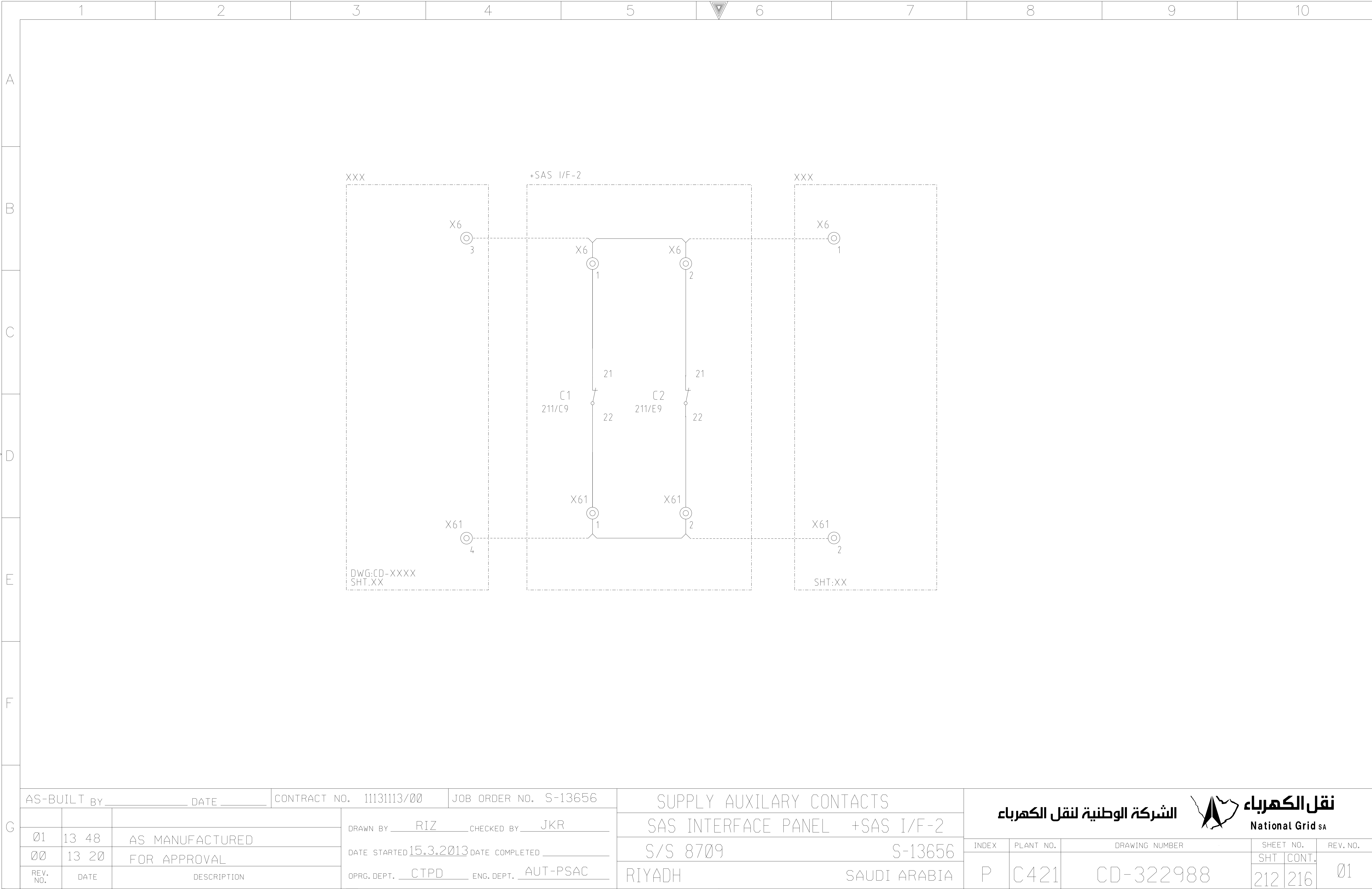
	1	2	3	4	5		6	7	8	9	10
A											
B											
C											
D											
E											
F											
G											

AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		COMMON LEGENDS			<div>الشركة الوطنية لنقل الكهرباء</div> <div> نقل الكهرباء National Grid sa</div>		
			DRAWN BY <u> RIZ </u> CHECKED BY <u> JKR </u>		SAS INTERFACE PANEL +SAS I/F-2							
01	13 48	AS MANUFACTURED	DATE STARTED <u>15.3.2013</u> DATE COMPLETED _____		S/S 8709 S-13656							
00	13 20	FOR APPROVAL	OPRG. DEPT. <u> CTPD </u> ENG. DEPT. <u> AUT-PSAC </u>		RIYADH SAUDI ARABIA							
REV. NO.	DATE	DESCRIPTION						INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
								P	C421	CD-322988	SHT 013 CONT. 014	01





THIS DRAWING AND THE INFORMATION CONTAINED HEREIN ARE THE SOLE PROPERTY OF National Grid SA NO REPRODUCTION IN FULL OR IN PART SHALL BE OBTAINED FROM THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF ITS OWNER.



THIS DRAWING AND THE INFORMATION CONTAINED HEREIN ARE THE SOLE PROPERTY OF National Grid SA NO REPRODUCTION IN FULL OR IN PART SHALL BE OBTAINED FROM THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF ITS OWNER.

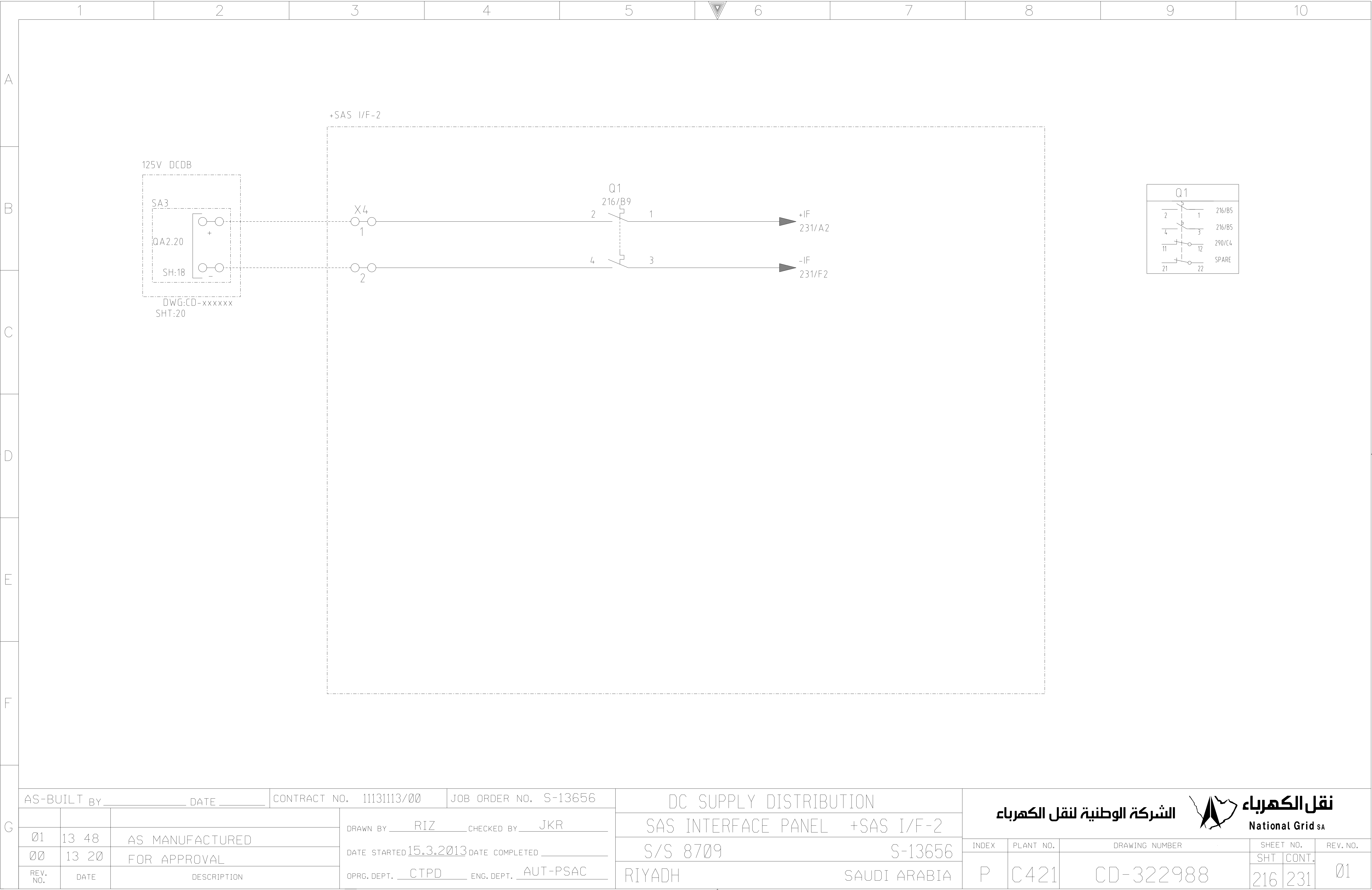


DMS

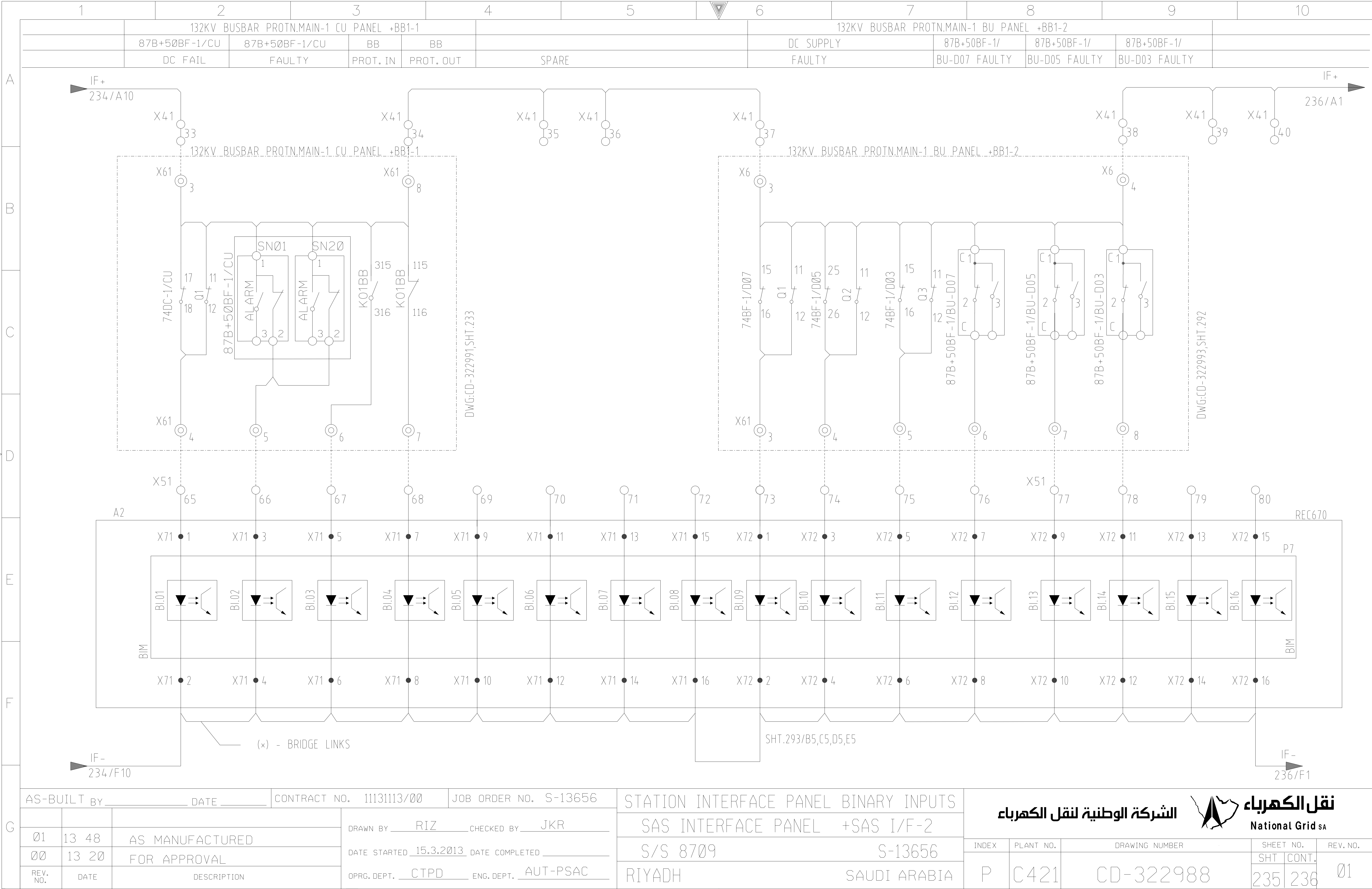
VECTOR

NGD200

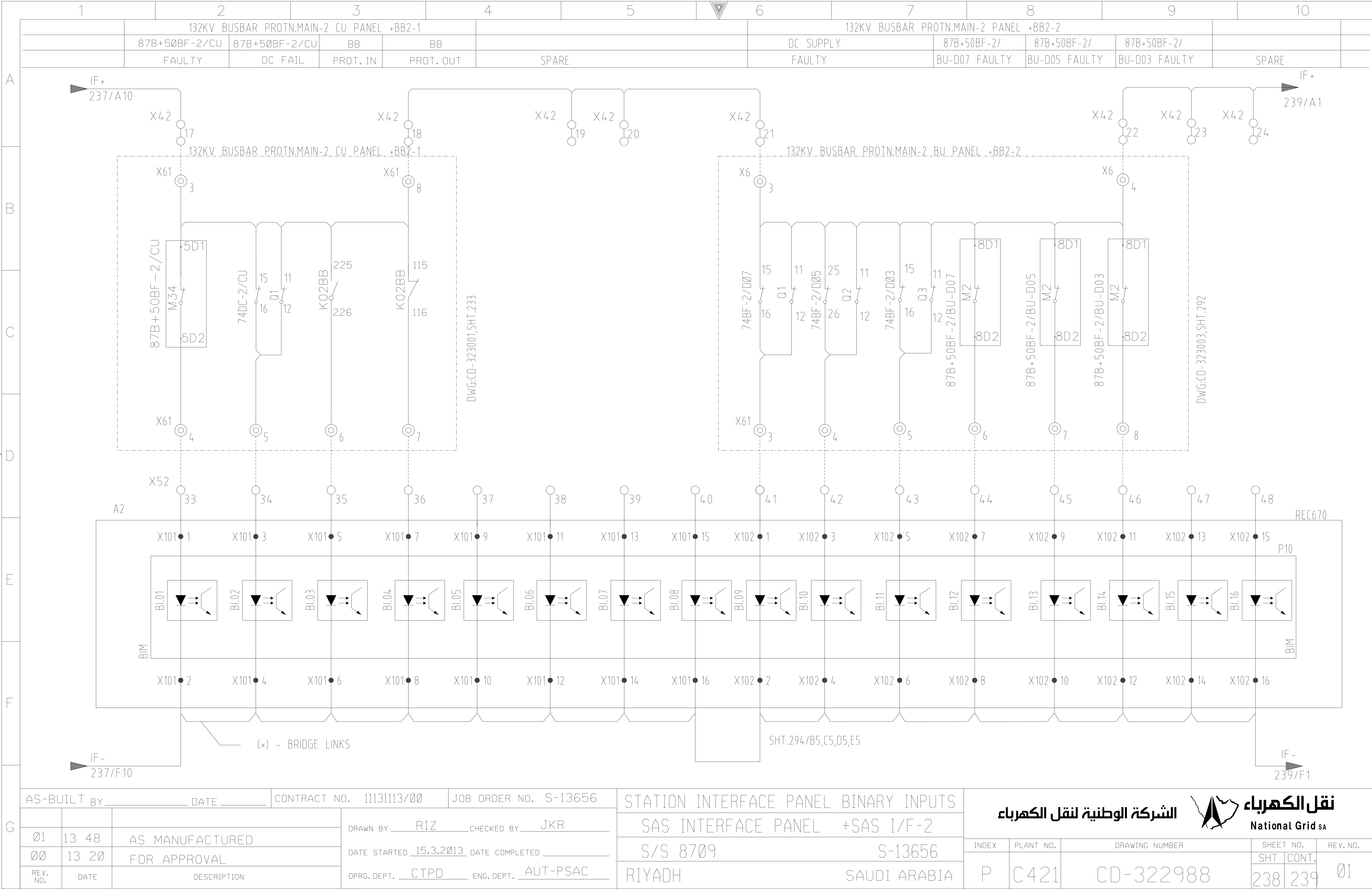
NG/D2-D (2012/01)



THIS DRAWING AND THE INFORMATION CONTAINED HEREIN ARE THE SOLE PROPERTY OF National Grid SA NO REPRODUCTION IN FULL OR IN PART SHALL BE OBTAINED FROM THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF ITS OWNER.



THIS DRAWING AND THE INFORMATION CONTAINED HEREIN ARE THE SOLE PROPERTY OF National Grid SA NO REPRODUCTION IN FULL OR IN PART SHALL BE OBTAINED FROM THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF ITS OWNER.



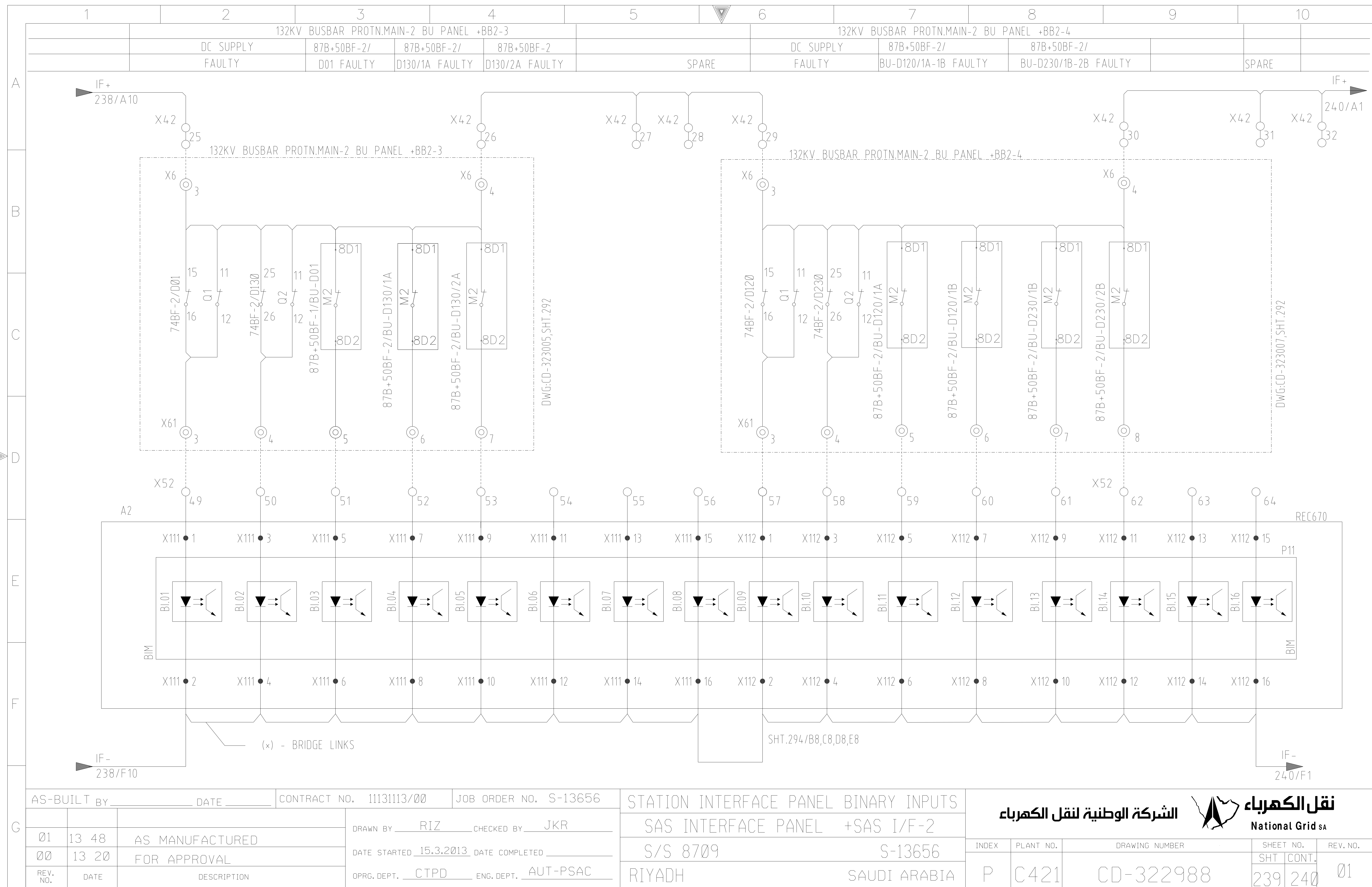
AS-BUILT BY _____ DATE _____ CONTRACT NO. 11131113/00 JOB ORDER NO. S-13656

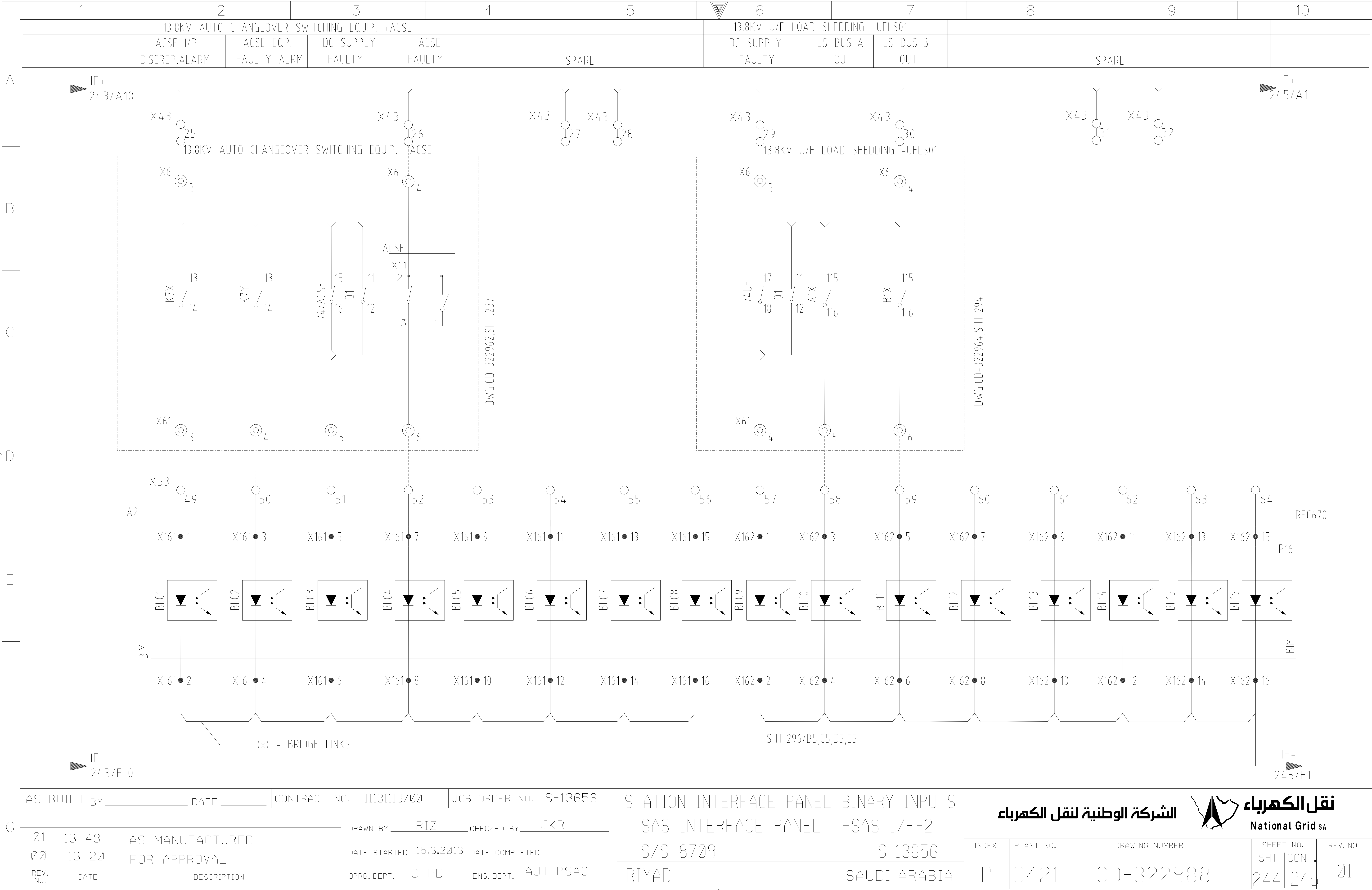
01	13 48	AS MANUFACTURED	DRAWN BY RIZ	CHECKED BY JKR
00	13 20	FOR APPROVAL	DATE STARTED 15.3.2013	DATE COMPLETED
REV. NO.	DATE	DESCRIPTION	OPRG. DEPT. CTPD	ENG. DEPT. AUT-PSAC

STATION INTERFACE PANEL BINARY INPUTS
SAS INTERFACE PANEL +SAS I/F-2
S/S 8709 S-13656
RIYADH SAUDI ARABIA

الشركة الوطنية لنقل الكهرباء
National Grid sa

INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
P	C421	CD-322988	SHT 238	CONT. 239
				01





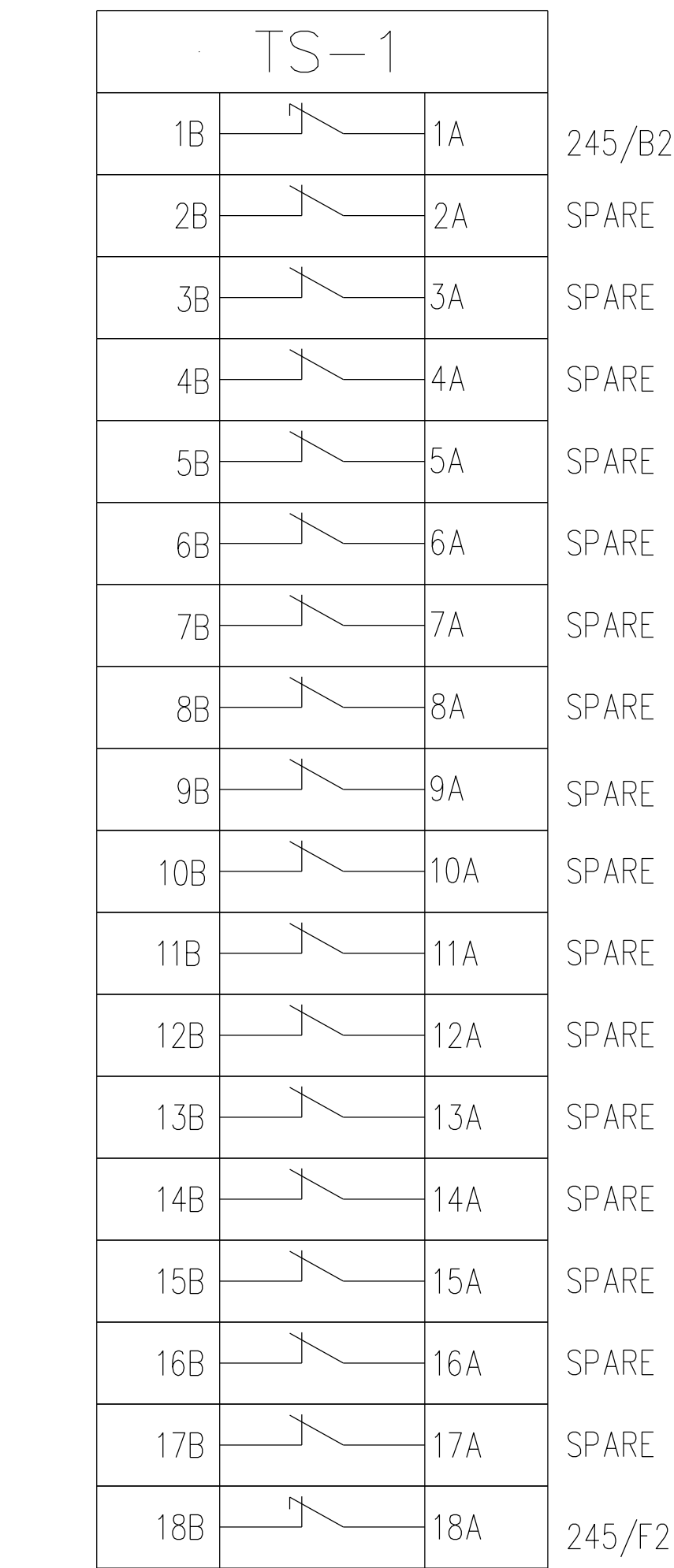
AS-BUILT BY _____ DATE _____ CONTRACT NO. 11131113/00 JOB ORDER NO. S-13656

01	13 48	AS MANUFACTURED
00	13 20	FOR APPROVAL
REV. NO.	DATE	DESCRIPTION

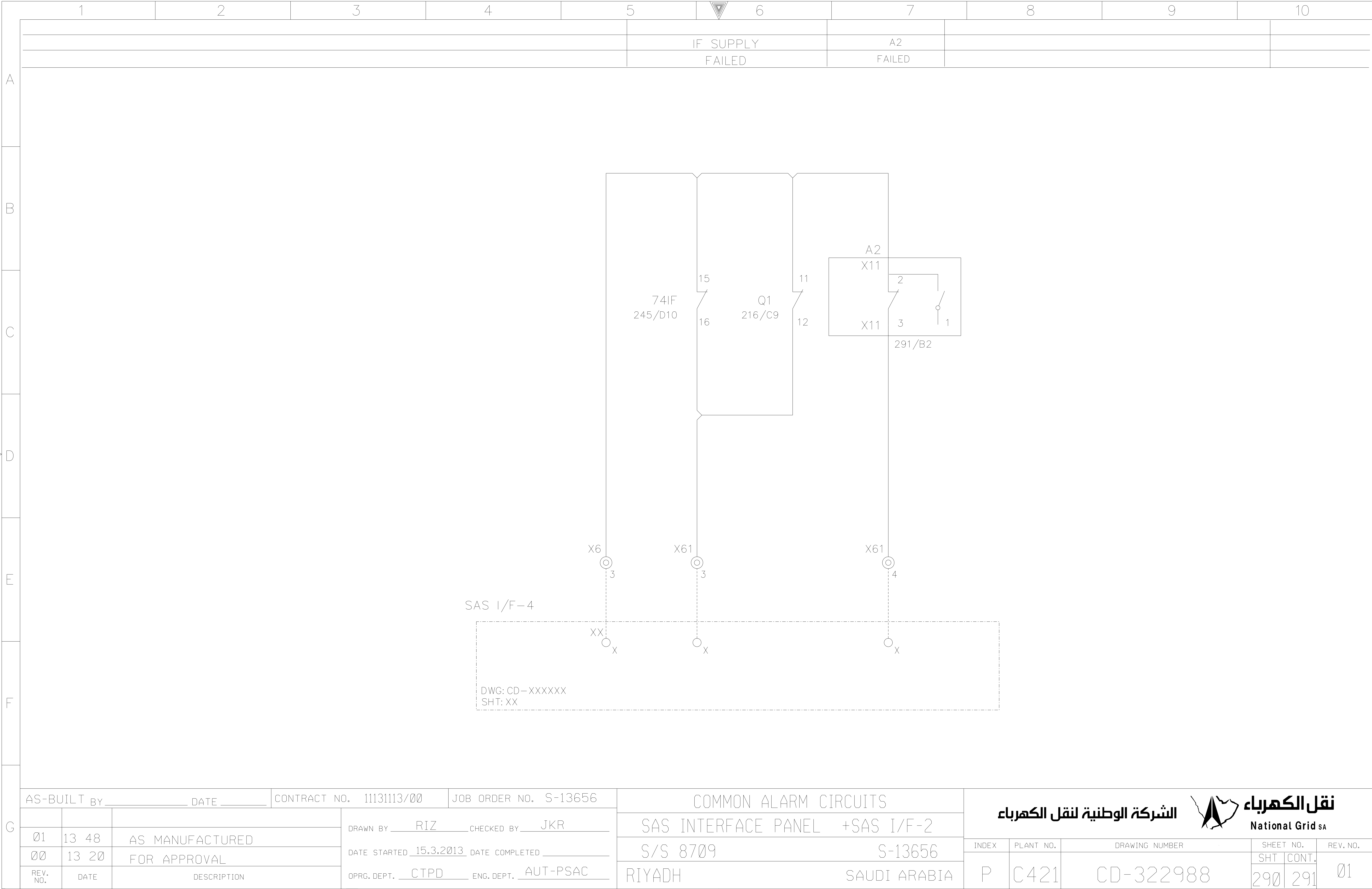
DRAWN BY	RIZ	CHECKED BY	JKR
DATE STARTED	15.3.2013	DATE COMPLETED	
OPRG. DEPT.	CTPD	ENG. DEPT.	AUT-PSAC

STATION INTERFACE PANEL BINARY INPUTS
SAS INTERFACE PANEL +SAS I/F-2
S/S 8709 S-13656
RIYADH SAUDI ARABIA

الشركة الوطنية لنقل الكهرباء National Grid sa				
INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
P	C421	CD-322988	SHT 244	CONT. 245 01

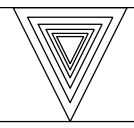
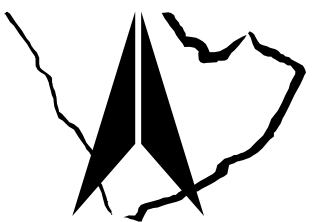


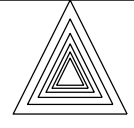
<p>74IF</p>		<p>245/E7</p> <p>SPARE</p> <p>290/D4</p> <p>SPARE</p>
<p>SPARE</p>		
		<p>SPARE</p> <p>SPARE</p> <p>SPARE</p> <p>SPARE</p>



1		2		3		4		5		6		7		8		9		10	
A2																			
BINARY INPUT CARD																			
A2																			
BIM P3																			
REC670																			
LOCATION=P3																			
PLANT ADAPTED CONFIGURATION																			
X31																			
+ 1 BI.01 //																			
- 2 BI.02 //																			
+ 3 BI.03 //																			
- 4 BI.04 //																			
+ 5 BI.05 //																			
- 6 BI.06 //																			
+ 7 BI.07 //																			
- 8 BI.08 //																			
+ 9 BI.09 //																			
- 10 BI.10 //																			
+ 11 BI.11 //																			
- 12 BI.12 //																			
+ 13 BI.13 //																			
- 14 BI.14 //																			
+ 15 BI.15 //																			
- 16 BI.16 //																			
X32																			
+ 1 BI.09 //																			
- 2 BI.10 //																			
+ 3 BI.11 //																			
- 4 BI.12 //																			
+ 5 BI.13 //																			
- 6 BI.14 //																			
+ 7 BI.15 //																			
- 8 BI.16 //																			
+ 9 BI.17 //																			
- 10 BI.18 //																			
+ 11 BI.19 //																			
- 12 BI.20 //																			
+ 13 BI.21 //																			
- 14 BI.22 //																			
+ 15 BI.23 //																			
- 16 BI.24 //																			
X41																			
+ 1 BI.01 //																			
- 2 BI.02 //																			
+ 3 BI.03 //																			
- 4 BI.04 //																			
+ 5 BI.05 //																			
- 6 BI.06 //																			
+ 7 BI.07 //																			
- 8 BI.08 //																			
+ 9 BI.09 //																			
- 10 BI.10 //																			
+ 11 BI.11 //																			
- 12 BI.12 //																			
+ 13 BI.13 //																			
- 14 BI.14 //																			
+ 15 BI.15 //																			
- 16 BI.16 //																			
X42																			
+ 1 BI.09 //																			
- 2 BI.10 //																			
+ 3 BI.11 //																			
- 4 BI.12 //																			
+ 5 BI.13 //																			
- 6 BI.14 //																			
+ 7 BI.15 //																			
- 8 BI.16 //																			
+ 9 BI.17 //																			
- 10 BI.18 //																			
+ 11 BI.19 //																			
- 12 BI.20 //																			
+ 13 BI.21 //																			
- 14 BI.22 //																			
+ 15 BI.23 //																			
- 16 BI.24 //																			
X51																			
+ 1 BI.01 //																			
- 2 BI.02 //																			
+ 3 BI.03 //																			
- 4 BI.04 //																			
+ 5 BI.05 //																			
- 6 BI.06 //																			
+ 7 BI.07 //																			
- 8 BI.08 //																			
+ 9 BI.09 //																			
- 10 BI.10 //																			
+ 11 BI.11 //																			
- 12 BI.12 //																			
+ 13 BI.13 //																			
- 14 BI.14 //																			
+ 15 BI.15 //																			
- 16 BI.16 //																			
X52																			
+ 1 BI.09 //																			
- 2 BI.10 //																			
+ 3 BI.11 //																			
- 4 BI.12 //																			
+ 5 BI.13 //																			
- 6 BI.14 //																			
+ 7 BI.15 //																			
- 8 BI.16 //																			
+ 9 BI.17 //																			
- 10 BI.18 //																			
+ 11 BI.19 //																			
- 12 BI.20 //																			
+ 13 BI.21 //																			
- 14 BI.22 //																			
+ 15 BI.23 //																			
- 16 BI.24 //																			

AS-BUILT BY _____ DATE _____				CONTRACT NO. 11131113/00				JOB ORDER NO. S-13656				BLOCK REFERENCE				<div>الشركة الوطنية لنقل الكهرباء</div> <div>نقل الكهرباء</div> <div>National Grid sa</div> <div><table><tr><td>INDEX</td><td>PLANT NO.</td><td colspan="2">DRAWING NUMBER</td><td colspan="2">SHEET NO.</td><td>REV. NO.</td></tr><tr><td>P</td><td>C421</td><td colspan="2">CD-322988</td><td>SHT</td><td>CONT.</td><td>01</td></tr><tr><td></td><td></td><td colspan="2"></td><td>292</td><td>293</td><td></td></tr></table></div>				INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.		REV. NO.	P	C421	CD-322988		SHT	CONT.	01					292	293	
INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.		REV. NO.																																		
P	C421	CD-322988		SHT	CONT.	01																																		
				292	293																																			
				DRAWN BY RIZ CHECKED BY JKR				SAS INTERFACE PANEL +SAS I/F-2																																
01 13 48 AS MANUFACTURED				DATE STARTED 15.3.2013 DATE COMPLETED _____				S/S 8709 S-13656																																
00 13 20 FOR APPROVAL				OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC				RIYADH SAUDI ARABIA																																
REV. NO.		DATE		DESCRIPTION																																				

	1	2	3	4	5		6	7	8	9	10																																																																																																																																																																									
A																																																																																																																																																																																				
B	A2																																																																																																																																																																																			
	BIM P6 REC670																																																																																																																																																																																			
C	LOCATION=P6																																																																																																																																																																																			
	PLANT ADAPTED CONFIGURATION																																																																																																																																																																																			
D	SHT.234/D1 TO D10																																																																																																																																																																																			
	<table><tr><td></td><td>X61</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>1</td><td>BI.01</td><td>//</td><td></td></tr><tr><td>- -----</td><td>2</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>3</td><td>BI.02</td><td>//</td><td></td></tr><tr><td>- -----</td><td>4</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>5</td><td>BI.03</td><td>//</td><td></td></tr><tr><td>- -----</td><td>6</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>7</td><td>BI.04</td><td>//</td><td></td></tr><tr><td>- -----</td><td>8</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>9</td><td>BI.05</td><td>//</td><td></td></tr><tr><td>- -----</td><td>10</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>11</td><td>BI.06</td><td>//</td><td></td></tr><tr><td>- -----</td><td>12</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>13</td><td>BI.07</td><td>//</td><td></td></tr><tr><td>- -----</td><td>14</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>15</td><td>BI.08</td><td>//</td><td></td></tr><tr><td>- -----</td><td>16</td><td></td><td></td><td></td></tr><tr><td></td><td>X62</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>1</td><td>BI.09</td><td>//</td><td></td></tr><tr><td>- -----</td><td>2</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>3</td><td>BI.10</td><td>//</td><td></td></tr><tr><td>- -----</td><td>4</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>5</td><td>BI.11</td><td>//</td><td></td></tr><tr><td>- -----</td><td>6</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>7</td><td>BI.12</td><td>//</td><td></td></tr><tr><td>- -----</td><td>8</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>9</td><td>BI.13</td><td>//</td><td></td></tr><tr><td>- -----</td><td>10</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>11</td><td>BI.14</td><td>//</td><td></td></tr><tr><td>- -----</td><td>12</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>13</td><td>BI.15</td><td>//</td><td></td></tr><tr><td>- -----</td><td>14</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>15</td><td>BI.16</td><td>//</td><td></td></tr><tr><td>- -----</td><td>16</td><td></td><td></td><td></td></tr></table>												X61				+ -----	1	BI.01	//		- -----	2				+ -----	3	BI.02	//		- -----	4				+ -----	5	BI.03	//		- -----	6				+ -----	7	BI.04	//		- -----	8				+ -----	9	BI.05	//		- -----	10				+ -----	11	BI.06	//		- -----	12				+ -----	13	BI.07	//		- -----	14				+ -----	15	BI.08	//		- -----	16					X62				+ -----	1	BI.09	//		- -----	2				+ -----	3	BI.10	//		- -----	4				+ -----	5	BI.11	//		- -----	6				+ -----	7	BI.12	//		- -----	8				+ -----	9	BI.13	//		- -----	10				+ -----	11	BI.14	//		- -----	12				+ -----	13	BI.15	//		- -----	14				+ -----	15	BI.16	//		- -----	16		
	X61																																																																																																																																																																																			
+ -----	1	BI.01	//																																																																																																																																																																																	
- -----	2																																																																																																																																																																																			
+ -----	3	BI.02	//																																																																																																																																																																																	
- -----	4																																																																																																																																																																																			
+ -----	5	BI.03	//																																																																																																																																																																																	
- -----	6																																																																																																																																																																																			
+ -----	7	BI.04	//																																																																																																																																																																																	
- -----	8																																																																																																																																																																																			
+ -----	9	BI.05	//																																																																																																																																																																																	
- -----	10																																																																																																																																																																																			
+ -----	11	BI.06	//																																																																																																																																																																																	
- -----	12																																																																																																																																																																																			
+ -----	13	BI.07	//																																																																																																																																																																																	
- -----	14																																																																																																																																																																																			
+ -----	15	BI.08	//																																																																																																																																																																																	
- -----	16																																																																																																																																																																																			
	X62																																																																																																																																																																																			
+ -----	1	BI.09	//																																																																																																																																																																																	
- -----	2																																																																																																																																																																																			
+ -----	3	BI.10	//																																																																																																																																																																																	
- -----	4																																																																																																																																																																																			
+ -----	5	BI.11	//																																																																																																																																																																																	
- -----	6																																																																																																																																																																																			
+ -----	7	BI.12	//																																																																																																																																																																																	
- -----	8																																																																																																																																																																																			
+ -----	9	BI.13	//																																																																																																																																																																																	
- -----	10																																																																																																																																																																																			
+ -----	11	BI.14	//																																																																																																																																																																																	
- -----	12																																																																																																																																																																																			
+ -----	13	BI.15	//																																																																																																																																																																																	
- -----	14																																																																																																																																																																																			
+ -----	15	BI.16	//																																																																																																																																																																																	
- -----	16																																																																																																																																																																																			
E	SHT.235/D1 TO D10																																																																																																																																																																																			
	<table><tr><td></td><td>X71</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>1</td><td>BI.01</td><td>//</td><td></td></tr><tr><td>- -----</td><td>2</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>3</td><td>BI.02</td><td>//</td><td></td></tr><tr><td>- -----</td><td>4</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>5</td><td>BI.03</td><td>//</td><td></td></tr><tr><td>- -----</td><td>6</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>7</td><td>BI.04</td><td>//</td><td></td></tr><tr><td>- -----</td><td>8</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>9</td><td>BI.05</td><td>//</td><td></td></tr><tr><td>- -----</td><td>10</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>11</td><td>BI.06</td><td>//</td><td></td></tr><tr><td>- -----</td><td>12</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>13</td><td>BI.07</td><td>//</td><td></td></tr><tr><td>- -----</td><td>14</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>15</td><td>BI.08</td><td>//</td><td></td></tr><tr><td>- -----</td><td>16</td><td></td><td></td><td></td></tr><tr><td></td><td>X72</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>1</td><td>BI.09</td><td>//</td><td></td></tr><tr><td>- -----</td><td>2</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>3</td><td>BI.10</td><td>//</td><td></td></tr><tr><td>- -----</td><td>4</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>5</td><td>BI.11</td><td>//</td><td></td></tr><tr><td>- -----</td><td>6</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>7</td><td>BI.12</td><td>//</td><td></td></tr><tr><td>- -----</td><td>8</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>9</td><td>BI.13</td><td>//</td><td></td></tr><tr><td>- -----</td><td>10</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>11</td><td>BI.14</td><td>//</td><td></td></tr><tr><td>- -----</td><td>12</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>13</td><td>BI.15</td><td>//</td><td></td></tr><tr><td>- -----</td><td>14</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>15</td><td>BI.16</td><td>//</td><td></td></tr><tr><td>- -----</td><td>16</td><td></td><td></td><td></td></tr></table>												X71				+ -----	1	BI.01	//		- -----	2				+ -----	3	BI.02	//		- -----	4				+ -----	5	BI.03	//		- -----	6				+ -----	7	BI.04	//		- -----	8				+ -----	9	BI.05	//		- -----	10				+ -----	11	BI.06	//		- -----	12				+ -----	13	BI.07	//		- -----	14				+ -----	15	BI.08	//		- -----	16					X72				+ -----	1	BI.09	//		- -----	2				+ -----	3	BI.10	//		- -----	4				+ -----	5	BI.11	//		- -----	6				+ -----	7	BI.12	//		- -----	8				+ -----	9	BI.13	//		- -----	10				+ -----	11	BI.14	//		- -----	12				+ -----	13	BI.15	//		- -----	14				+ -----	15	BI.16	//		- -----	16		
	X71																																																																																																																																																																																			
+ -----	1	BI.01	//																																																																																																																																																																																	
- -----	2																																																																																																																																																																																			
+ -----	3	BI.02	//																																																																																																																																																																																	
- -----	4																																																																																																																																																																																			
+ -----	5	BI.03	//																																																																																																																																																																																	
- -----	6																																																																																																																																																																																			
+ -----	7	BI.04	//																																																																																																																																																																																	
- -----	8																																																																																																																																																																																			
+ -----	9	BI.05	//																																																																																																																																																																																	
- -----	10																																																																																																																																																																																			
+ -----	11	BI.06	//																																																																																																																																																																																	
- -----	12																																																																																																																																																																																			
+ -----	13	BI.07	//																																																																																																																																																																																	
- -----	14																																																																																																																																																																																			
+ -----	15	BI.08	//																																																																																																																																																																																	
- -----	16																																																																																																																																																																																			
	X72																																																																																																																																																																																			
+ -----	1	BI.09	//																																																																																																																																																																																	
- -----	2																																																																																																																																																																																			
+ -----	3	BI.10	//																																																																																																																																																																																	
- -----	4																																																																																																																																																																																			
+ -----	5	BI.11	//																																																																																																																																																																																	
- -----	6																																																																																																																																																																																			
+ -----	7	BI.12	//																																																																																																																																																																																	
- -----	8																																																																																																																																																																																			
+ -----	9	BI.13	//																																																																																																																																																																																	
- -----	10																																																																																																																																																																																			
+ -----	11	BI.14	//																																																																																																																																																																																	
- -----	12																																																																																																																																																																																			
+ -----	13	BI.15	//																																																																																																																																																																																	
- -----	14																																																																																																																																																																																			
+ -----	15	BI.16	//																																																																																																																																																																																	
- -----	16																																																																																																																																																																																			
F	SHT.236/D1 TO D10																																																																																																																																																																																			
	<table><tr><td></td><td>X81</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>1</td><td>BI.01</td><td>//</td><td></td></tr><tr><td>- -----</td><td>2</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>3</td><td>BI.02</td><td>//</td><td></td></tr><tr><td>- -----</td><td>4</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>5</td><td>BI.03</td><td>//</td><td></td></tr><tr><td>- -----</td><td>6</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>7</td><td>BI.04</td><td>//</td><td></td></tr><tr><td>- -----</td><td>8</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>9</td><td>BI.05</td><td>//</td><td></td></tr><tr><td>- -----</td><td>10</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>11</td><td>BI.06</td><td>//</td><td></td></tr><tr><td>- -----</td><td>12</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>13</td><td>BI.07</td><td>//</td><td></td></tr><tr><td>- -----</td><td>14</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>15</td><td>BI.08</td><td>//</td><td></td></tr><tr><td>- -----</td><td>16</td><td></td><td></td><td></td></tr><tr><td></td><td>X82</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>1</td><td>BI.09</td><td>//</td><td></td></tr><tr><td>- -----</td><td>2</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>3</td><td>BI.10</td><td>//</td><td></td></tr><tr><td>- -----</td><td>4</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>5</td><td>BI.11</td><td>//</td><td></td></tr><tr><td>- -----</td><td>6</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>7</td><td>BI.12</td><td>//</td><td></td></tr><tr><td>- -----</td><td>8</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>9</td><td>BI.13</td><td>//</td><td></td></tr><tr><td>- -----</td><td>10</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>11</td><td>BI.14</td><td>//</td><td></td></tr><tr><td>- -----</td><td>12</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>13</td><td>BI.15</td><td>//</td><td></td></tr><tr><td>- -----</td><td>14</td><td></td><td></td><td></td></tr><tr><td>+ -----</td><td>15</td><td>BI.16</td><td>//</td><td></td></tr><tr><td>- -----</td><td>16</td><td></td><td></td><td></td></tr></table>												X81				+ -----	1	BI.01	//		- -----	2				+ -----	3	BI.02	//		- -----	4				+ -----	5	BI.03	//		- -----	6				+ -----	7	BI.04	//		- -----	8				+ -----	9	BI.05	//		- -----	10				+ -----	11	BI.06	//		- -----	12				+ -----	13	BI.07	//		- -----	14				+ -----	15	BI.08	//		- -----	16					X82				+ -----	1	BI.09	//		- -----	2				+ -----	3	BI.10	//		- -----	4				+ -----	5	BI.11	//		- -----	6				+ -----	7	BI.12	//		- -----	8				+ -----	9	BI.13	//		- -----	10				+ -----	11	BI.14	//		- -----	12				+ -----	13	BI.15	//		- -----	14				+ -----	15	BI.16	//		- -----	16		
	X81																																																																																																																																																																																			
+ -----	1	BI.01	//																																																																																																																																																																																	
- -----	2																																																																																																																																																																																			
+ -----	3	BI.02	//																																																																																																																																																																																	
- -----	4																																																																																																																																																																																			
+ -----	5	BI.03	//																																																																																																																																																																																	
- -----	6																																																																																																																																																																																			
+ -----	7	BI.04	//																																																																																																																																																																																	
- -----	8																																																																																																																																																																																			
+ -----	9	BI.05	//																																																																																																																																																																																	
- -----	10																																																																																																																																																																																			
+ -----	11	BI.06	//																																																																																																																																																																																	
- -----	12																																																																																																																																																																																			
+ -----	13	BI.07	//																																																																																																																																																																																	
- -----	14																																																																																																																																																																																			
+ -----	15	BI.08	//																																																																																																																																																																																	
- -----	16																																																																																																																																																																																			
	X82																																																																																																																																																																																			
+ -----	1	BI.09	//																																																																																																																																																																																	
- -----	2																																																																																																																																																																																			
+ -----	3	BI.10	//																																																																																																																																																																																	
- -----	4																																																																																																																																																																																			
+ -----	5	BI.11	//																																																																																																																																																																																	
- -----	6																																																																																																																																																																																			
+ -----	7	BI.12	//																																																																																																																																																																																	
- -----	8																																																																																																																																																																																			
+ -----	9	BI.13	//																																																																																																																																																																																	
- -----	10																																																																																																																																																																																			
+ -----	11	BI.14	//																																																																																																																																																																																	
- -----	12																																																																																																																																																																																			
+ -----	13	BI.15	//																																																																																																																																																																																	
- -----	14																																																																																																																																																																																			
+ -----	15	BI.16	//																																																																																																																																																																																	
- -----	16																																																																																																																																																																																			
G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		BLOCK REFERENCE		<div>الشركة الوطنية لنقل الكهرباء</div> <div> نقل الكهرباء National Grid sa</div>																																																																																																																																																																											
			DRAWN BY <u>RIZ</u> CHECKED BY <u>JKR</u>		SAS INTERFACE PANEL +SAS I/F-2																																																																																																																																																																															
	01 13 48		AS MANUFACTURED		DATE STARTED <u>15.3.2013</u> DATE COMPLETED _____		S/S 8709 S-13656		INDEX		PLANT NO.	DRAWING NUMBER	SHEET NO.		REV. NO.																																																																																																																																																																					
	00 13 20		FOR APPROVAL		OPRG. DEPT. <u>CTPD</u> ENG. DEPT. <u>AUT-PSAC</u>		RIYADH SAUDI ARABIA		P		C421	CD-322988	SHT 293 CONT. 294		01																																																																																																																																																																					



DMS

VECTOR

NG/D2-D (2012/01)
NGD200

1

2

3

4

5

6

7

8

9

10

A

B

A2

BIM P9

REC670

LOCATION=P9

PLANT ADAPTED CONFIGURATION

X91

+-----

1

BI.01

//

2

BI.02

//

+-----

3

BI.03

//

4

BI.04

//

+-----

5

BI.05

//

6

BI.06

//

+-----

7

BI.07

//

8

BI.08

//

+-----

9

10

+-----

11

12

+-----

13

14

+-----

15

16

X92

+-----

1

BI.09

//

2

BI.10

//

+-----

3

BI.11

//

4

BI.12

//

+-----

5

BI.13

//

6

BI.14

//

+-----

7

BI.15

//

8

BI.16

//

+-----

9

10

+-----

11

12

+-----

13

14

+-----

15

16

A2

BIM P10

REC670

LOCATION=P10

PLANT ADAPTED CONFIGURATION

X101

+-----

1

BI.01

//

2

BI.02

//

+-----

3

BI.03

//

4

BI.04

//

+-----

5

BI.05

//

6

BI.06

//

+-----

7

BI.07

//

8

BI.08

//

+-----

9

10

+-----

11

12

+-----

13

14

+-----

15

16

X102

+-----

1

BI.09

//

2

BI.10

//

+-----

3

BI.11

//

4

BI.12

//

+-----

5

BI.13

//

6

BI.14

//

+-----

7

BI.15

//

8

BI.16

//

+-----

9

10

+-----

11

12

+-----

13

14

+-----

15

16

A2

BIM P11

REC670

LOCATION=P11

PLANT ADAPTED CONFIGURATION

X111

+-----

1

BI.01

//

2

BI.02

//

+-----

3

BI.03

//

4

BI.04

//

+-----

5

BI.05

//

6

BI.06

//

+-----

7

BI.07

//

8

BI.08

//

+-----

9

10

+-----

11

12

+-----

13

14

+-----

15

16

X112

+-----

1

BI.09

//

2

BI.10

//

+-----

3

BI.11

//

4

BI.12

//

+-----

5

BI.13

//

6

BI.14

//

+-----

7

BI.15

//

8

BI.16

//

+-----

9

10

+-----

11

12

+-----

13

14

+-----

15

16

AS-BUILT BY_____DATE _____

CONTRACT NO. 11131113/00

JOB ORDER NO. S-13656

01

13 48

AS MANUFACTURED

00

13 20

FOR APPROVAL

REV. NO.

DATE

DESCRIPTION

DRAWN BY RIZ

CHECKED BY JKR

DATE STARTED 15.3.2013

DATE COMPLETED _____

OPRG. DEPT. CTPD

ENG. DEPT. AUT-PSAC

BLOCK REFERENCE

SAS INTERFACE PANEL +SAS I/F-2

S/S 8709

S-13656

RIYADH

SAUDI ARABIA

الشركة الوطنية لنقل الكهرباء

نقل الكهرباء

National Grid sa

INDEX

PLANT NO.

DRAWING NUMBER

SHEET NO.

REV. NO.

P

C421

CD-322988

294

295

01

NG/D2-D (2012/01)

DMS

VECTOR

NGD200

THIS DRAWING AND THE INFORMATION CONTAINED HEREIN ARE THE SOLE PROPERTY OF National Grid SA NO REPRODUCTION IN FULL OR IN PART SHALL BE OBTAINED FROM THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF ITS OWNER.

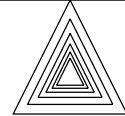
	1	2	3	4	5		6	7	8	9	10																																																																																						
A																																																																																																	
B																																																																																																	
C																																																																																																	
D																																																																																																	
E																																																																																																	
F																																																																																																	
G	<table><tr><td colspan="3">AS-BUILT BY _____ DATE _____</td><td colspan="3">CONTRACT NO. 11131113/00</td><td colspan="3">JOB ORDER NO. S-13656</td><td colspan="2">BLOCK REFERENCE</td><td colspan="2"><div>الشركة الوطنية لنقل الكهرباء</div><div> نقل الكهرباء National Grid sa</div></td></tr><tr><td></td><td></td><td></td><td colspan="3">DRAWN BY RIZ CHECKED BY JKR</td><td colspan="2">SAS INTERFACE PANEL +SAS I/F-2</td><td colspan="2">S/S 8709</td><td colspan="2">S-13656</td><td colspan="2"><table><tr><td>INDEX</td><td>PLANT NO.</td><td colspan="2">DRAWING NUMBER</td><td colspan="2">SHEET NO.</td><td>REV. NO.</td></tr><tr><td rowspan="2">P</td><td rowspan="2">C421</td><td colspan="2" rowspan="2">CD-322988</td><td>SHT</td><td>CONT.</td><td rowspan="2">01</td></tr><tr><td>295</td><td>296</td></tr></table></td></tr><tr><td></td><td></td><td></td><td colspan="3">DATE STARTED 15.3.2013 DATE COMPLETED _____</td><td colspan="2">S/ S 8709</td><td colspan="2">SAUDI ARABIA</td><td colspan="2">RIYADH</td><td colspan="2"></td></tr><tr><td></td><td></td><td></td><td colspan="3">OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC</td><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td></tr><tr><td></td><td>REV. NO.</td><td>DATE</td><td colspan="3">DESCRIPTION</td><td colspan="3"></td><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td></tr></table>											AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00			JOB ORDER NO. S-13656			BLOCK REFERENCE		<div>الشركة الوطنية لنقل الكهرباء</div> <div> نقل الكهرباء National Grid sa</div>					DRAWN BY RIZ CHECKED BY JKR			SAS INTERFACE PANEL +SAS I/F-2		S/S 8709		S-13656		<table><tr><td>INDEX</td><td>PLANT NO.</td><td colspan="2">DRAWING NUMBER</td><td colspan="2">SHEET NO.</td><td>REV. NO.</td></tr><tr><td rowspan="2">P</td><td rowspan="2">C421</td><td colspan="2" rowspan="2">CD-322988</td><td>SHT</td><td>CONT.</td><td rowspan="2">01</td></tr><tr><td>295</td><td>296</td></tr></table>		INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.		REV. NO.	P	C421	CD-322988		SHT	CONT.	01	295	296				DATE STARTED 15.3.2013 DATE COMPLETED _____			S/ S 8709		SAUDI ARABIA		RIYADH							OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC												REV. NO.	DATE	DESCRIPTION											
AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00			JOB ORDER NO. S-13656			BLOCK REFERENCE		<div>الشركة الوطنية لنقل الكهرباء</div> <div> نقل الكهرباء National Grid sa</div>																																																																																						
			DRAWN BY RIZ CHECKED BY JKR			SAS INTERFACE PANEL +SAS I/F-2		S/S 8709		S-13656		<table><tr><td>INDEX</td><td>PLANT NO.</td><td colspan="2">DRAWING NUMBER</td><td colspan="2">SHEET NO.</td><td>REV. NO.</td></tr><tr><td rowspan="2">P</td><td rowspan="2">C421</td><td colspan="2" rowspan="2">CD-322988</td><td>SHT</td><td>CONT.</td><td rowspan="2">01</td></tr><tr><td>295</td><td>296</td></tr></table>		INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.		REV. NO.	P	C421	CD-322988		SHT	CONT.	01	295	296																																																																				
INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.		REV. NO.																																																																																											
P	C421	CD-322988		SHT	CONT.	01																																																																																											
				295	296																																																																																												
			DATE STARTED 15.3.2013 DATE COMPLETED _____			S/ S 8709		SAUDI ARABIA		RIYADH																																																																																							
			OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC																																																																																														
	REV. NO.	DATE	DESCRIPTION																																																																																														

SHT.240/D1 TO D10

SHT.241/D1 TO D10

SHT.242/D1 TO D10

THIS DRAWING AND THE INFORMATION CONTAINED HEREIN ARE THE SOLE PROPERTY OF National Grid SA NO REPRODUCTION IN FULL OR IN PART SHALL BE OBTAINED FROM THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF ITS OWNER.



DMS

VECTOR

NG/D2-D (2012/01)

NGD200

1

2

3

4

5

6

7

8

9

10

A

B

C

D

E

F

AS-BUILT BY _____ DATE _____

CONTRACT NO. 11131113/00

JOB ORDER NO. S-13656

Ø1

13 48

AS MANUFACTURED

ØØ

13 20

FOR APPROVAL

REV. NO.

DATE

DESCRIPTION

DRAWN BY RIZ

CHECKED BY JKR

DATE STARTED 15.3.2013

DATE COMPLETED _____

OPRG. DEPT. CTPD

ENG. DEPT. AUT-PSAC

BLOCK REFERENCE

SAS INTERFACE PANEL +SAS I/F-2

S/S 8709

S-13656

RIYADH

SAUDI ARABIA

الشركة الوطنية لنقل الكهرباء

National Grid sa

INDEX

PLANT NO.

DRAWING NUMBER

SHEET NO.

SHT

CONT.

REV. NO.

P

C421

CD-322988

296

301

Ø1

A2

BIM P15

REC670

LOCATION=P15

PLANT ADAPTED CONFIGURATION

+ -----

1

BI.01

//

- -----

2

BI.02

//

+ -----

3

BI.03

//

- -----

4

BI.04

//

+ -----

5

BI.05

//

- -----

6

BI.06

//

+ -----

7

BI.07

//

- -----

8

BI.08

//

+ -----

9

BI.09

//

- -----

10

BI.10

//

+ -----

11

BI.11

//

- -----

12

BI.12

//

+ -----

13

BI.13

//

- -----

14

BI.14

//

+ -----

15

BI.15

//

- -----

16

BI.16

//

X151

X152

SHT.243/D1 TO D10

A2

BIM P16

REC670

LOCATION=P16

PLANT ADAPTED CONFIGURATION

+ -----

1

BI.01

//

- -----

2

BI.02

//

+ -----

3

BI.03

//

- -----

4

BI.04

//

+ -----

5

BI.05

//

- -----

6

BI.06

//

+ -----

7

BI.07

//

- -----

8

BI.08

//

+ -----

9

BI.09

//

- -----

10

BI.10

//

+ -----

11

BI.11

//

- -----

12

BI.12

//

+ -----

13

BI.13

//

- -----

14

BI.14

//

+ -----

15

BI.15

//

- -----

16

BI.16

//

X161

X162

SHT.244/D1 TO D10

NG/D2-D (2012/01)

DMS

VECTOR

NGD200

1		2		3		4		5		6		7		8		9		10						
A	INTERNAL REFERENCE		X3 AC CKT.		INTERNAL REFERENCE		X51 CONTROL & PROTN.		INTERNAL REFERENCE		X51 CONTROL & PROTN.		INTERNAL REFERENCE		X41 DC CKTS.		INTERNAL REFERENCE		X52 CONTROL & PROTN.		INTERNAL REFERENCE		X52 CONTROL & PROTN.	
	211/A3		1		231/D1		1		234/D3		51		231/A2		1		236/D1		1		239/D3		51	
	211/B3		2		231/D2		2		234/D3		52		231/A8		2		236/D2		2		239/D3		52	
	211/A3		3		231/D3		3		234/D4		53		231/A8		3		236/D3		3		239/D4		53	
	211/B3		4		231/D4		4		234/D5		54		231/A9		4		236/D4		4		239/D5		54	
	211/B3		5		231/D5		5		234/D6		55		231/A9		5		236/D5		5		239/D6		55	
	211/C3		6		231/D6		6		234/D7		56		231/A9		6		236/D6		6		239/D7		56	
	211/B3		7		231/D7		7		234/D8		57		231/A9		7		236/D7		7		239/D8		57	
	211/C3		8		231/D8		8		234/D9		58		231/A9		8		236/D8		8		239/D9		58	
	SPARE		9		231/D9		9		234/D10		59		231/A9		9		236/D9		9		239/D10		59	
SPARE		10		231/D10		10		235/D2		60		232/A2		10		236/D10		10		239/D10		60		
B																								
C																								
D																								
E																								
F																								
G	AS-BUILT BY _____ DATE _____				CONTRACT NO. 11131113/00				JOB ORDER NO. S-13656				TERMINAL BLOCK REFERENCE				<div>الشركة الوطنية لنقل الكهرباء</div> <div> نقل الكهرباء National Grid sa</div>							
					DRAWN BY RIZ CHECKED BY JKR				SAS INTERFACE PANEL +SAS I/F-2															
	01 13 48 AS MANUFACTURED				DATE STARTED 15.3.2013 DATE COMPLETED _____				S/S 8709 S-13656				INDEX PLANT NO. DRAWING NUMBER SHEET NO. REV. NO.											
	00 13 20 FOR APPROVAL				PRG. DEPT. CTPD ENG. DEPT. AUT-PSAC				RIYADH SAUDI ARABIA				P C421 CD-322988 301 302 01											
	REV. NO.		DATE		DESCRIPTION																			

THIS DRAWING AND THE INFORMATION CONTAINED HEREIN ARE THE SOLE PROPERTY OF National Grid SA NO REPRODUCTION IN FULL OR IN PART SHALL BE OBTAINED FROM THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF ITS OWNER.

	1	2	3	4	5	6	7	8	9	10			
A	INTERNAL REFERENCE	X42 DC CKTS.	INTERNAL REFERENCE	X53 CONTROL & PROTN.	INTERNAL REFERENCE	X53 CONTROL & PROTN.	INTERNAL REFERENCE	X43 DC CKTS.	INTERNAL REFERENCE	X4 DC CKTS.	REFERENCE	X61 ALM. CKT.	
	236/A2	1	241/D1	1	244/D3	51	241/A2	1	216/B3	1	212/E5	1	
	236/A8	2	241/D2	2	244/D3	52	241/A8	2	216/B3	2	212/E5	2	
	236/A8	3	241/D3	3	244/D4	53	241/A8	3	SPARE	3	290/E5	3	
	236/A8	4	241/D3	4	244/D4	54	241/A8	4	SPARE	4	290/E6	4	
	236/A9	5	241/D4	5	244/D5	55	241/A9	5	SPARE	5	SPARE	5	
	236/A9	6	241/D4	6	244/D5	56	241/A9	6			SPARE	6	
	236/A9	7	241/D5	7	244/D6	57	241/A9	7			SPARE	7	
	236/A9	8	241/D5	8	244/D6	58	241/A9	8			SPARE	8	
	237/A2	9	241/D6	9	244/D7	59	242/A2	9			SPARE	9	
B	237/A8	10	241/D6	10	244/D8	60	242/A8	10					
	237/A8	11	241/D7	11	244/D8	61	242/A8	11					
	237/A8	12	241/D8	12	244/D9	62	242/A8	12					
	237/A9	13	241/D8	13	244/D9	63	242/A9	13					
	237/A9	14	241/D9	14	244/D10	64	242/A9	14					
	237/A9	15	241/D9	15	SPARE	65	242/A9	15					
	237/A9	16	241/D10	16	SPARE	66	242/A9	16					
	238/A2	17	242/D2	17	SPARE	67	243/A2	17					
	238/A6	18	242/D2	18	SPARE	68	243/A6	18					
	238/A7	19	242/D3	19	SPARE	69	243/A7	19					
C	238/A7	20	242/D3	20	SPARE	70	243/A7	20					
	238/A8	21	242/D4	21	SPARE	71	243/A8	21					
	238/A8	22	242/D4	22	SPARE	72	243/A8	22					
	238/A8	23	242/D5	23	SPARE	73	243/A8	23					
	238/A8	24	242/D5	24	SPARE	74	243/A8	24					
	239/A2	25	242/D6	25	SPARE	75	244/A2	25					
	239/A6	26	242/D6	26	SPARE	76	244/A6	26					
	239/A7	27	242/D7	27	SPARE	77	244/A7	27					
	239/A7	28	242/D8	28	SPARE	78	244/A7	28					
	239/A8	29	242/D8	29	SPARE	79	244/A8	29					
D	239/A8	30	242/D9	30	SPARE	80	244/A8	30					
	239/A8	31	242/D9	31			244/A8	31					
	239/A8	32	242/D10	32			244/A8	32					
	240/A2	33	243/D2	33			SPARE	33					
	240/A6	34	243/D2	34			SPARE	34					
	240/A7	35	243/D3	35			SPARE	35					
	240/A7	36	243/D3	36			SPARE	36					
	240/A8	37	243/D4	37			SPARE	37					
	240/A8	38	243/D4	38			SPARE	38					
	240/A8	39	243/D5	39			SPARE	39					
E	240/A8	40	243/D5	40			SPARE	40					
	SPARE	41	243/D6	41			SPARE	41					
	SPARE	42	243/D6	42			SPARE	42					
	SPARE	43	243/D7	43			SPARE	43					
	SPARE	44	243/D8	44			SPARE	44					
	SPARE	45	243/D8	45			SPARE	45					
	SPARE	46	243/D9	46			SPARE	46					
	SPARE	47	243/D9	47			SPARE	47					
	SPARE	48	243/D10	48			SPARE	48					
	SPARE	49	244/D2	49			SPARE	49					
F	SPARE	50	244/D2	50			SPARE	50					
G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		TERMINAL BLOCK REFERENCE		<div>الشركة الوطنية لنقل الكهرباء</div> <div>نقل الكهرباء</div> <div>National Grid sa</div>				
							SAS INTERFACE PANEL +SAS I/F-2						
	01	13 48	AS MANUFACTURED		DRAWN BY RIZ CHECKED BY JKR		S/S 8709 S-13656		INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
	00	13 20	FOR APPROVAL		DATE STARTED 15.3.2013 DATE COMPLETED _____		RIYADH SAUDI ARABIA		P	C421	CD-322988	SHT 302	CONT. NIL
	REV. NO.	DATE	DESCRIPTION		OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC								

THIS DRAWING AND THE INFORMATION CONTAINED HEREIN ARE THE SOLE PROPERTY OF National Grid sa NO REPRODUCTION IN FULL OR IN PART SHALL BE OBTAINED FROM THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF ITS OWNER.